CB HORIZONS

DECEMBER 1961
40 CENTS

FIGHTING IT OUT WITH INTERFERENCE

The Q-Bird and Turkey Call

See Page 28

THE CITIZENS BAND RADIO MAGAZINE

IN THIS ISSUE —

Wanna Call CQ? • A Stoner Mobile Converter Construction Article • Build This—Inexpensive Ground Plane • Four New Rig Testing Reports • CB Club of the Year Award • A Free CB Station . . . and Much, Much More!

INTERNATIONAL'S Executive

FOR SUPERIOR CITIZENS

The ultimate in Executive Citizens transceivers. New crystal filter which minimizes adjacent channel interference in the receiver. New built-in receiver calibration circuit. New International NR squelch. New 12 position crystal control transmit channel selector. New front panel microphone jack. New provision for connecting external speaker and S/meter. Tunable dual conversion superheterodyne receiver covering all 23 channels. Two crystal control receive positions. Push-to-talk operation. Three way power supply for 6/12 vdc and 115 vac. Full five watts plate input. Certified tolerance ±.005%. **Complete with 1 transmit crystal, 1 receive crystal, new style ceramic microphone and coil cord.**

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International's exciting New compact transceiver. Field tested full five watt transmitter contained in the higher price Executive transceivers. Certified tolerance ±.005%. Tunable superheterodyne receiver covering all 23 channels. Three position crystal control transmit channel selector. Manual transmit-receive control. Noise limiter. Available accessories include four separate power supplies — 6 vdc, 12 vdc, 24 vdc, or 115 vac, push-to-talk relay kit, and 12 position transmit channel selector. **Complete with 1 transmit crystal, matching microphone and external speaker, but less power supply.**

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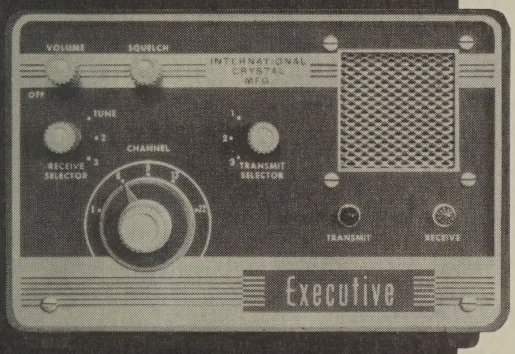
See The Executive Series at Your Authorized International Dealer

INTERNATIONAL CRYSTAL MFG. CO., INC.

transceivers

BAND COMMUNICATION

MODEL 50



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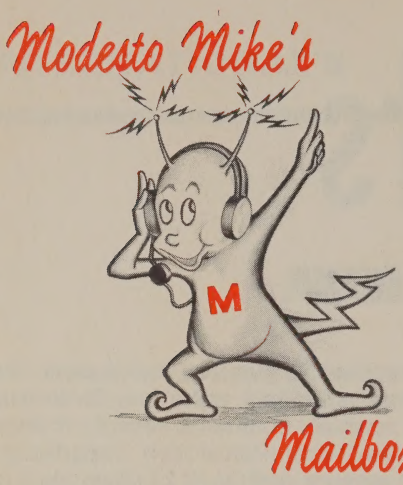

Dear Mike—

The Seminole CB Club of Ft. Myers, Fla., sponsors a cottage at Sunland Training Center, an institution for mentally retarded children.

We would like to hear news from other clubs that also have a worthwhile project which they sponsor.

Louis Shanaway
3974 Madison Avenue
Ft. Myers, Fla.

Hey gang, here are some guys who do more with their club than sit around and flap their gums on Channel 11. *Anybody else for a worthwile project?*

Mike

Hey Mike—

Regarding your FCC Monitoring Station Map and List (October issue), can you give me some additional information?

First, do they come on the air and let you know that they are monitoring or timing you? Can you tell when they are monitoring? Do they monitor from mobile units?

Chester Wyszipiske, 19Q5694
Milford, Mich.

Well, Chet, our sources tell us that if someone comes on the air and tells you that he's from the FCC he might mean Feinberg's Clothing Corner—he certainly doesn't mean Federal Communications Commission. The real FCC doesn't engage in rag-chewing with the violators and the only way you'd ever know that they were tuned in is when you get their official notification. Mobile units have been pressed into service for monitoring chores.

Mike

Hi Mike—

Thanks for the best magazine in the world. I'm involved in the sales and servicing of commercial two-way radio equipment as well as CB equipment. Why don't you devote space in CBH to the commercial two-way radio field?

Ken Bostick, 1W2916
Rutland, Vt.

Good question, Ken. We don't feel that the majority of our CBH readers care to cope with the advanced theories and engineering practices inherent to the commercial two-way radio industry, even though the theories are akin to CB. You would undoubtedly be interested in our monthly publication COMMUNICATIONS HORIZONS which covers the engineering aspects of all forms of two-way radio. It's the sister publication to CBH and is the trade publication for the entire two-way radio sales/service industry (CB too!).

Mike

Mike Old Buddy—

Heard your Editor Tom Kneitel (12Q-1747) operating portable 18 in Chicago October 19. What gives?

Tom J. Vastine
18A4885

You caught us, Tom. Editor Kneitel and I made a trip into the Midwest and to the East Coast during October, meeting some of the gang and collecting editorial material for future issues of CBH. The folks at International Crystal suggested 12Q1747 *carry an Exec* 10 *along, when he stopped in Oklahoma City, and in your town the people at Mark Mobile loaded him down with portable whips. We made* 20 *contacts from the hotel in Chicago, but had a heck of a time getting on the plane at O'Hare Field. Seems the airline didn't understand what CB was all about and Kneitel and I looked like "walking radios!"*

Mike

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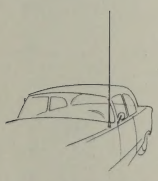
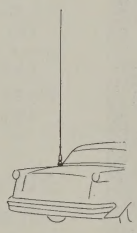
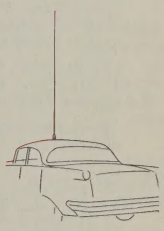
Four models are available for a variety of mounting arrangements.







TWL-M: with chrome-plated, single hole, top mounting body mount.

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TLW: with standard 3/8"x24 threaded base stud for use with adaptive mounts.

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DECEMBER 1961
VOLUME 1 - NUMBER 7

CB HORIZONS

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OUR COVER: Across the country the strange signals of the Q-Bird" and the "Turkey Call" are fighting it out for attention against the background of skip interference, local ragchewers and auto noise. Read all about these "knights of the airwaves" on page 28 of this issue of CB Horizons.

CB'ers . . .

DON'T BE LEFT OUT IN THE WINTER COLD!

SEND IN YOUR SUBSCRIPTION ORDER AND/OR CALL BOOK ORDER TODAY!

FACT ONE: The long winter months ahead will give you more time for CB activities, club functions, and hours to spend on improving and fixing up your station. Your monthly copy of CB Horizons is your only guaranteed way of staying informed and active in CB affairs through the winter! **See special money saving offer on reverse side.**

FACT TWO: The 1962 "Q" series Call Book is nearly completed. Only 15,000 will be printed. If you don't order your copy **today**—you may not be able to get one!

TURN THIS CARD OVER FOR SPECIAL CBH SUBSCRIPTION-CALL BOOK OFFER. DON'T MISS OUT IN '62'

PREVIEW

Here are some of the features in store for YOU in the January, 1962 issue of CB Horizons.

AN EXTRA-SPECIAL MOBILE ISSUE!

Jim Kyle, 10W0901-CBH's West Coast Consulting Engineer, writes about . . .

- CHOOSING A MOBILE RIG FOR **YOUR** CAR
- CHOOSING A MOBILE ANTENNA FOR **YOUR** CAR
- MOUNTING A RIG IN **YOUR** CAR
- MOUNTING A CB ANTENNA ON **YOUR** CAR
- TUNING **YOUR** MOBILE ANTENNA
- MOUNTING **YOUR** MOBILE ACCESSORIES

and . . . Special Features All About

- ELIMINATING MOBILE NOISE IN **YOUR** CAR
- MOBILE IN A COMPACT OR 'SPORTS CAR'
- A HANDY MOBILE FILE ON MONITORING CHANNELS

and . . . New For CB

- "THE 10% OVERLENGTH MOBILE WHIP"

ALSO — THESE EXCLUSIVE CBH REPORTS

- T. K. VISITS THE WASHINGTON FCC OFFICES
- LUBBOCK, TEXAS JAMBOREE REPORT
- A BOLD-NEW PLAN FOR ESTABLISHING REGIONAL SECONDARY CALLING CHANNELS

PLUS . . .

All of the Regular columns including CCM Reports, CB and Sunspots, T.K. on CB, Modesto Mike, Our Man in Washington, Station of the Month, CBL Card of the Month, CBH Lab Reports, CB Showcase and much, much more!

CB HORIZONS — the nation's ONLY magazine devoted exclusively and entirely to Citizens Band Radio, Written By and For CB'ers.

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THIS OFFER EXPIRES DECEMBER 10

(Tear out and airmail to CB Horizons, P.O. Box 3150, Modesto, California)

DEAR CBH:

I have checked off the proper line below indicating the BONUS issues of CBH I am eligible to receive, and reserving my copy of the 1962 "Q" series Call-Book, Handbook. I understand the Call-Book will be mailed on or before January 20. Please bill me the remaining $2.95 after December 15.

- ☐ Enclosed $4.00 for 15 issues of CB Horizons and reserving my copy of the 1962 CB Call-Book. **I am mailing this form prior to November 22.**
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(NOTE: If you do not wish to receive the 1962 Call-Book, merely cross out the appropriate line on the form above.)

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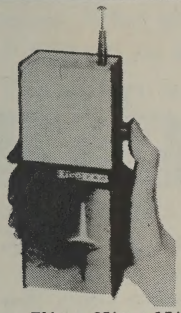

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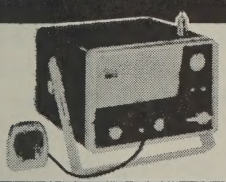

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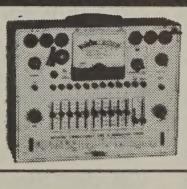

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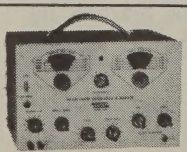

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MR. 10-4 REPORTS ON . . .

So You Wanna Call CQ?

By Tom Kneitel, 12Q1747/WA6SYV

For the past few months I've been paying particular attention to what seems to be a burning question in the minds of some CB'ers—and at least of passing interest to many others. *The question? "How can I call CQ?"* We have made up an extremely clever reply which consists of our advice, "call JUdson 2-4460 in New York City." This, of course. is the telephone number of "CQ" magazine and always leaves my audience rocking in peals of laughter—but it avoids the basic question.

Then we saw a copy of an editorial in the SOUTHERN CALIFORNIA CITIZENS BAND ASSOCIATION's monthly newspaper. In it, Editor Cliff Morris (11-W4009), wrote an "open letter" to CBH which said, in part:

"Many CB'ers, including myself, are hobby minded in electronics and pursue the field of 'ham radio' along with CB. Personally, I think both hams and CB'ers should work hand-in-hand to promote much better relations and activities in all fields of radio. Much can be learned by pooling interests. Not only do CB'ers turn 'ham' but many hams turn 'CB'ers.' This fact tells me that there are common interests on both sides, and that the potential is there to promote the better relations and activities.

"Possibly (CBH) could help the cause by publishing an article concerning this line of thought."

This set us to thinking—however it takes more than one request to get us to do an article.

Then the cards and letters started coming in; every day brings a few more requests from CB'ers who want to know about becoming hams. Today alone cards came in asking this very same question from 2W-1536, 1Q5067, 11Q3607, 18B8885, 19W1721, 19W4898, 19W5822, and 20Q3649. They ask, "What does Ham radio offer me?" "What exams must I take?" "How do I study for the Ham exam?" This response alone indicates that there is sufficient reader interest to warrant our covering the subject, *at least once.* It will give that long sought after answer about calling CQ—and, by the way, no matter how you slice it, it can't be done legally on a licensed CB station.

We aren't going to try to talk you out of CB because as has been said over and over —"CB'ers can do what Hams can't do, and vice versa." We would like our readers to get the maximum use and enjoyment from electronics—we feel that CB will take care of the "use" and Ham radio will take care of the "enjoyment."

What Does Ham Radio Offer?

That's probably the first question in your mind—after all, you already have a CB station which consists of a transmitter and a receiver. What good is one more set, even if it operates on another band?

This brings us back to the question about each service having its own specific advantages. We all know how the FCC has been frowning upon the strictly hobby use of 11 meters—insiders tell us that the FCC is slowly reaching the boiling point on the matter and when the dam bursts it will make quite a splash. If you call CQ or work on CB you get the FCC on your back. Not only can you do this on a ham band, the FCC actually created the ham bands for the specific purpose of letting the American citizenry have a hobby outlet in the electronics field—they *want* you to call CQ and work skip.

For the beginner in electronics the easiest type of license to obtain for operating in the Ham bands are the "Novice" and "Technician" classes.

The Novice License

Of the two types of license available to the beginner, the Novice is probably the *least* useful. Sure, all you need to know to obtain a Novice license is 5 words per minute code and a few basic electronics theories and FCC rules, but the license expires in a year and *cannot* be renewed.

With a Novice license you may not use more than 75 watts input to the final and must operate with code (c.w.) on portions of 3 low frequency bands. Novices may use voice only on part of the "2 meter" band (145 to 147 mc.). You must be crystal controlled on all bands. The lower frequency bands (where you are allowed to operate only on c.w. and use a maximum of 75 watts are almost useless for working "real" DX. You are competing with stations operated by General Class licensees who use VFO's and are allowed to run up to 1000 watts. This coupled with the fact that the vanishing sunspots (which propagate signals on these frequencies) are making the lower frequencies almost useless anyway, possibly makes the Novice "ticket" hold little appeal for you.

Age has nothing to do with one's ability to become a 'ham radio operator'. This young man is Larry Lenon, WV6GDM at the controls of his ham station in Long Beach, California. Other young hams include a young girl in Montana, age 7, and a host of cub and sub-teen boy scouts. On the other end of the scale, lots of new hams are past retirement age, and find ham radio an excellent outlet for retirement age activities.

Any licensed Amateur holding at least a General Class license may give you the Novice exam, and it is all done by mail.

The Technician License

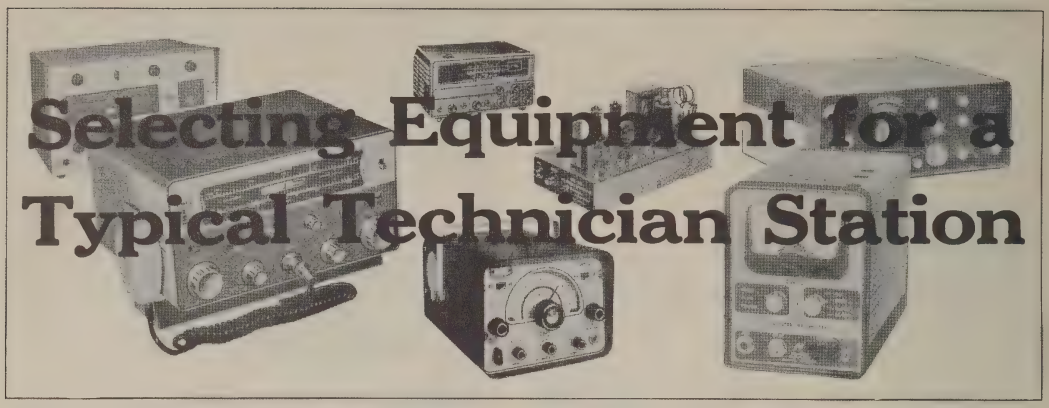
The Technician license is basically a license for experimenters. The code requirement is, like the Novice, only 5 words per minute. The written portion of the exam is more advanced than the Novice license, being exactly the same as that required for the General Class license. A Technician license is valid for 5 years and may be renewed. The holder of this class of license has full Amateur privileges (1000 watts, VFO, voice or c.w.) on all 11 Amateur bands above 50 mc. (with the exception of a portion of the 2 meter band).

The two primary bands included within the Technician's privileges are the 6 meter band, which runs from 50 to 54 mc. and the portion of the 2 meter band which runs between 145 and 147 mc.

When 6 meter skip conditions are right (and 6 meter conditions are getting better while the lower frequencies are growing worse) you are able to work the entire Western Hemisphere (North and South America, and Hawaii. (CBH Publisher Bob Cooper worked all states and continents over his station, K6EDX).

On 2 meters you should be able to work several hundred miles without much grief if you have a halfway decent beam.

(Continued on page 37)



Selecting Equipment for a Typical Technician Station

Richard Barham, 12W4341/K6DMH

Every time someone brings up the subject of Amateur radio to a CB operator the conversation naturally winds its way towards "How much equipment would I need?" To answer this question in the best possible and most explanatory method, we decided that we would actually set up a typical Technician Class station and give you a look at the equipment itself to show you exactly what you might use in your operation.

The equipment shown here was carefully selected for its competitive price, versatility, quality, and appearance. Actually there are different brands of the types of equipment shown, bear this in mind when you shop.

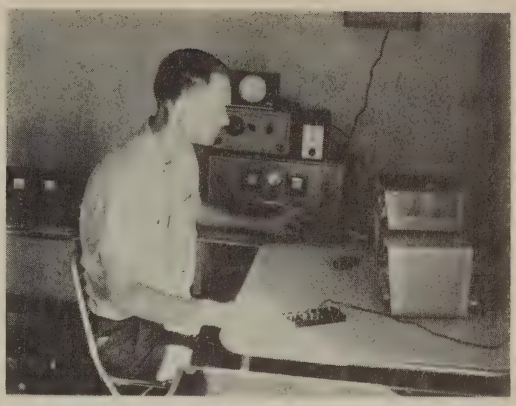
The first place we started was with the antennae. If you are to have any kind of decent operation on 6 and 2 meters you must have beams with as much gain as possible, placed as high as you can get them (no 20 foot height limitations here). We selected Hy-Gain's 10-element 2-meter and 8-element 6-meter beams. They were mounted atop a 50 foot mast which was perched atop a 2 story building. With the beams we achieved over 13 db gain on 2 meters and about 12 db over a ½-wave dipole on 6-meter. The antennae are both aluminum and their combined weight is less than 17 lbs. To get the maximum possible results from these two excellent antennae, we used a rotor—the one selected was the Alliance Tenna-Rotor, a popular TV-type.

The next line was the transmission line —RG-8/U for maximum signal transfer.

Down at the bottom of the lead-in we then set about coming up with the station itself. Already having a Hammarlund HQ-140X in existence at the shack made the task easier. The HQ-140X is a general coverage communications receiver which tunes the frequency range from 540 kc. to 30 mc. If you happen to have a HQ-105TR CB transceiver at your shack, you will not only be able to set up a ham station with a minimum of expense, you will be able to use the HQ-105TR for both ham and CB use.

At any rate, we had a HQ-140X, and since its highest frequency coverage was like most communications receivers, 30 mc., we had to figure a way to make it receive signals in the 6 meter (50-54 mc.) and 2 meter (145-147 mc.) Technician bands. This was easily accomplished by the addition of a Johnson (they make the Viking Messenger CB rig) "6N2" converter. Unlike some converters, this unit operates on 115 VAC, which saves a lot of digging around in the receiver for power to furnish the converter for its operation. A flick of a knob on the panel of the converter and you automatically tune either 6 or 2 meters—and the unit has its own r.f. gain control to help you knock the pegs out from under very strong local stations which might "overload" your receiver and the lead to the antenna on the roof. In other words, it takes about 10 minutes to hook up and requires but a screwdriver. All we had to do to receive then was to turn on both the receiver and the converter and tune the receiver from 14 through 18 mc. Simple? Yes; and the converter worked so well that it made us all the more

TYPICAL TECHNICIAN STATION — assembled from readily available commercially constructed units. Hammarlund Super-Pro receiver at left, Johnson 6N2 converter on top; The transmitter, on the card table at right, is the Globe Hi-Bander VHF-62, covering both 6 and 2 meters. On top of the VHF-62, a Gonset VFO for 6, 2 and 1¼ meters.



TECHNICIANS ARE PEOPLE—Just like you and I! Here K6YJH (12Q2339-unit 4) lets fly with a "CQ-6 Meters" on the 50 watt VHF-62. He raised a station in San Francisco, 80 miles away and exchanged S8 reports. Two hours later he snagged a VE7 in Vancouver, British Columbia, Canada, S-9 both ways!

anxious to get the transmitter on the air.

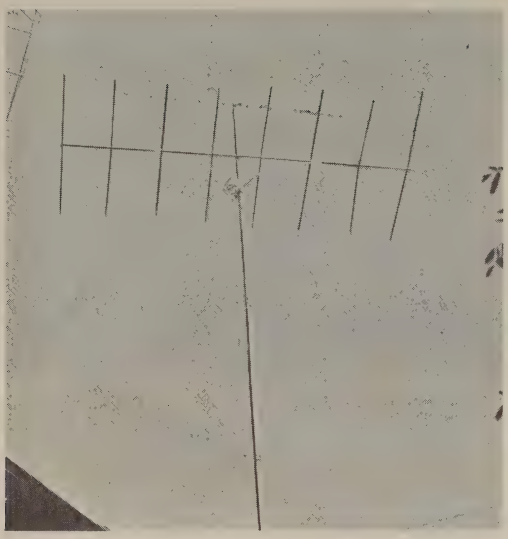
The transmitter selected was a Globe (makers of the CB-200 and CB-100A CB rigs) HI-BANDER VHF-62. This unit has a very fine reputation and if it had to build its reputation on simplicity alone it would have done well. We timed it from packing crate to the moment the little green power light on the panel went on—20 minutes, most of which was spent soldering the antenna relay to the back of the chassis (we were nervous). This rig kicks out about 50 watts and is tuned up on any frequency within the bands by the manipulation of 5 simple controls—all tuning being accomplished with the aid of a panel meter. All you do is tune for maximum meter reading on 4 of the controls and a "dip" on one of them. Real simple.

To get the thing on frequency we used crystals from International Crystal and The James Knights Company—Internationals on 2 meters and the JK's on 6. Two brands were used only because the individual crystals happened to be readily available when the transmitter arrived.

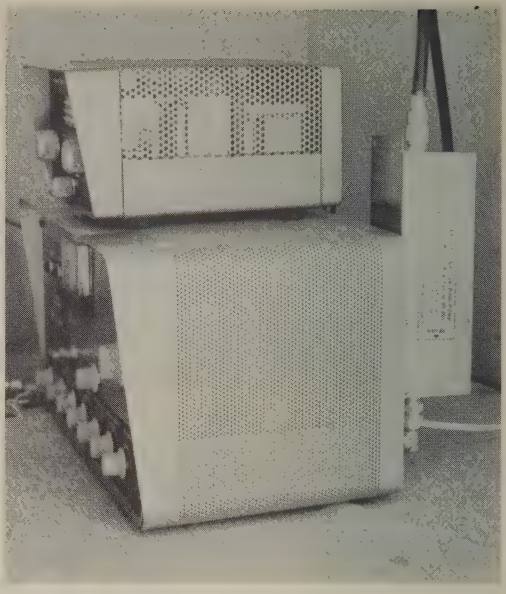
Crystal operation gives you the opportunity to have several frequencies with which other operators will soon associate you, and lets you land on "Net" frequencies with ease. Many operators like to use a VFO in addition to crystals so that they can achieve maximum flexibility. So the next step was to add the flexibility to the station by the addition of a Gonset (G-12, G-14, and G-15 CB rigs) VFO. This unit plugs into the crystal socket of the transmitter and lets you zip up and down the band to "work 'em all." The Gonset VFO operates on both the 6 and 2 meter bands and has the additional feature of being able to operate on the 220 mc. band, very popular with experimenters.

Anyone who has operated on 6 meters usually hedges when the subject of TVI is brought up—the band is fantastic for destroying Channel 2, especially in weak-signal areas (Modesto is a Channel 2 weak-signal area). We're no different than anyone else—we turned the rig on and blew Channel 2 clear to the great beyond! Man, it really went! The solution was an R. L. Drake TV-1000-LP Low Pass filter attached in the transmission line. TVI solved in 2 minutes—Channel 2 came in with but a trace of TVI on the set in the next room. A Drake TV-300-HP High Pass filter added to the TV set cured it completely.

The Gonset VFO was the finishing touch to this typical station (it may or may not have been "typical", but certainly was "ideal"). It was put together with the least amount of time and trouble we've ever seen from a "components" station. Each individual piece of equipment was selected carefully and we are happy to say that after



TWO-BAND ANTENNA ARRAY — Consisting of "long-john yagis" from Hy-Gain Antenna Products. The 8 element 6-meter beam is horizontally polarized just above the rotor, the 10 element 2-meter antenna is vertical because most of the gang in this area are vertical on this band.



TVI SUPPRESSOR—Drake TV-1000-LP filter allows your 50 megacycle (6 meter) signal to pass on to the antenna, keeping harmonics from getting to the outside. Very helpful in fringe TV areas.

we got the station perking it was quickly apparent that we couldn't possibly have gotten together a better station with the limited budget we set out to utilize.

Contacts were racked up left and right with "solid copy" all the way. The first station worked on 6 meters was 130 miles away and said we were pinning his needle. The first station snagged on 2 meters was a *mobile* unit atop a mountain 160 miles away.

Mobile? Gad! We hadn't even thought of operating mobile—the great stomping grounds of CB'ers. Would a mobile unit be as easy to install as a CB mobile?

After looking around the available equipment we determined that it probably would be best to use a transceiver for a mobile installation rather than a component unit. We came across a little gem from Lafayette (HE-20A, HE-15 etc.), the HE-35A—no larger than a CB rig! It has a tunable superhet receiver covering the entire 6 meter band and a built-in TVI filter. The unit may be operated as a base station from 115 VAC (it has no "peaking" controls and is essentially no more difficult to operate than any CB rig) or as a mobile unit with accessory 6 or 12 VDC power supplies(costs about the same as a low-cost CB rig).

We took the rig out to the mobile unit and hooked it to the same connectors that the CB rig uses (power and antenna) and left the CB whip attached (an 11 meter whip, while not ideal for 6 meter operation, is nevertheless approximately a ½-wave length on 6 meters). Presto, we were on the air! A run across the band showed us that the receiver was certainly doing its job, and a click of the transmit switch brought us a station in Stockton, Calif., about 30 miles away, who thought we were a local. 'Nuff said about the HE-35A, we can't imagine a less expensive way to hang out your shingle on 6 meters and still have enough of a signal to chop down the noise on the band.

10-7

We were so enthused about this report on the new HE-35A that CBH prevailed upon Lafayette Radio to offer one **free** to a lucky CBH reader. Yes, **FREE**! If you would like to win half the battle of becoming a ham (the other half is getting the license) and place rag-chewing and "CQ-ing" dreams within legality you need only to fill your name in on the card between pages 44 and 45 of this issue of CBH. Now what could be easier than that? This is in addition to all those free CB goodies we're giving away this month—which you get a crack at by filling out the card and sending it to us. So send!—Editor.

first from new tronics

a new approach in the design of CB antennas

Model CB-1

Base has chrome plated split ball to meet severe angle requirements of front fender. Swivels up to 180°.

Model CB-2

Mast has same features as that on CB-27. Standard male thread fits any of models shown here.

Model C-32

Base has 1½" chrome plated die cast swivel ball, heavy phenolic insulator and cadmium plated hardware.

Model C-29-32

Base and stainless steel spring. Base is same as C-32. A rugged assembly that provides long life and attractive appearance.

The CB-27 series is designed for the individual who is particular about the appearance of his car... and wants performance, too.

MODEL CB-27 (Illustrated below)

Extends to 60", collapses to 27". Four section, chrome plated, heavy duty brass tubing assembly with sealed loading coil. Standard automotive ball-type swivel base. Includes 5' of RG58/U coaxial cable with PL-259. Tuneable top rod has etched tuning scales for field adjustment to 27 MC or 28-30 MC amateur bands.

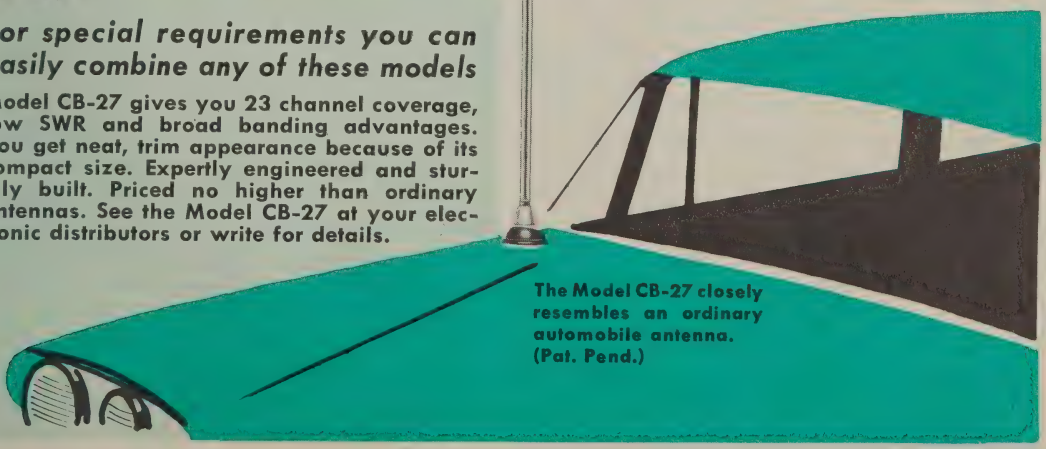
NEW-TRONICS

Manufacturers of Communication Antennas

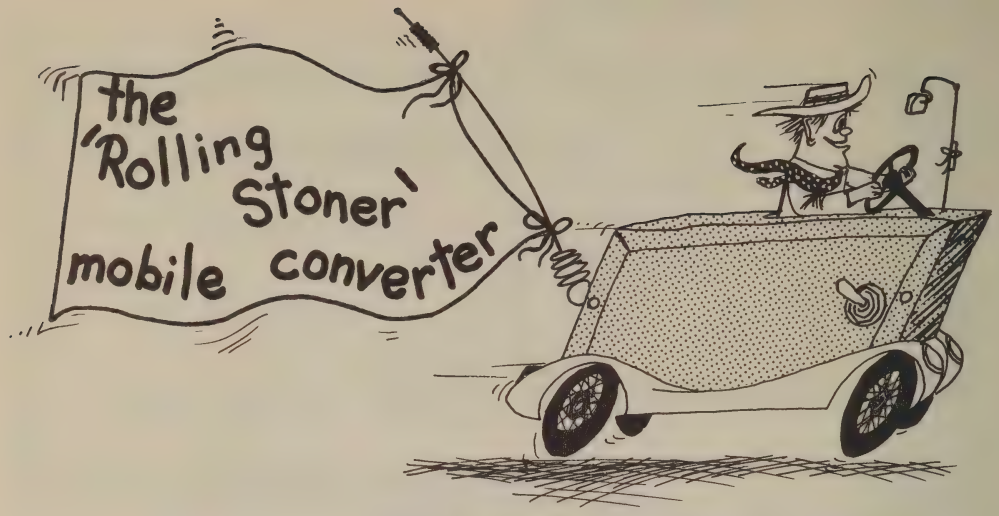
3455 Vega Avenue • Cleveland 13, Ohio

For special requirements you can easily combine any of these models

Model CB-27 gives you 23 channel coverage, low SWR and broad banding advantages. You get neat, trim appearance because of its compact size. Expertly engineered and sturdily built. Priced no higher than ordinary antennas. See the Model CB-27 at your electronic distributors or write for details.



The Model CB-27 closely resembles an ordinary automobile antenna. (Pat. Pend.)



BUILD THIS CITIZEN'S BAND MOBILE CONVERTER

By Donald L. Stoner, 11W1507

According to recent statistics, over one-half million Class D Citizens Band transceivers have been manufactured. Completely overlooked, however, is the beginner or experimenter who wants to "eavesdrop" on the band, but cannot afford the more complex equipment.

The least expensive "inhaler" you can build is a converter to translate signals from 27 mc. down to the broadcast band. This eliminates 90% of the construction work, for you can use an existing receiver to perform the chore of amplifying the signals picked up by your antenna. An auto radio is a "natural" for use with a converter because of its sensitivity, and excellent shielding, (which reduces interference).

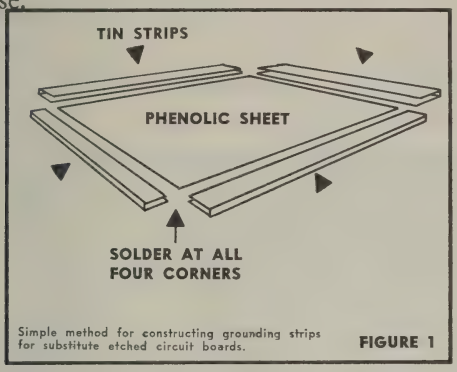
Why have just a converter in your car, you ask? One powerful reason is the cost. You can build the converter shown here for $15.00 or less if you have a few parts in the junk box. Compare that to the cost of $150.00 or more, for a complete transceiver. A CB converter in your car is very useful for locating interference or monitoring model airplane radio control channels out at the flying field. Commercially such converters might be useful for one-way paging when talk-back circuits are not required. On long trips it is interesting to listen in on Citizen's Band activities and helps pass the time more quickly.

Operation—The operation of the converter is easy to understand. Signals on the 27 mc. band are picked up by the antenna and coupled to coil L1. This coil, plus L2, separates the wanted and unwanted signals. The signal (radio frequency) energy is then applied to a *mixer* transistor. An additional signal, from the local oscillator transistor (Q2), is also fed to the mixer at the junction (connection point) of L2 and C7. These two signals combine in the mixer transistor (Q1) and produce a new third frequency called the intermediate or i.f.

For a practical example, consider a typical station on 27.005 mc. and the oscillator (Q2) energy at 27.865 mc. The difference between these two frequencies is 0.86 mc. or 860 kilocycles and the 27.005 mc. CB station can be heard at this point when the converter is connected to a car radio. Signals above or below the example frequency of 27.005 mc. will appear above or below 860 kc. on the car radio dial.

Construction—You can purchase the converter wired and tested from International Crystal Mfg. Co. (18 N. Lee Avenue, Oklahoma City, Oklahoma) or build it yourself. The schematic and parts list provide sufficient information to home-brew the entire converter from junk-box parts. About the only components you will have to buy are the crystal and the transistors. These transistors provide excellent performance using the car battery for power. *Note that the*

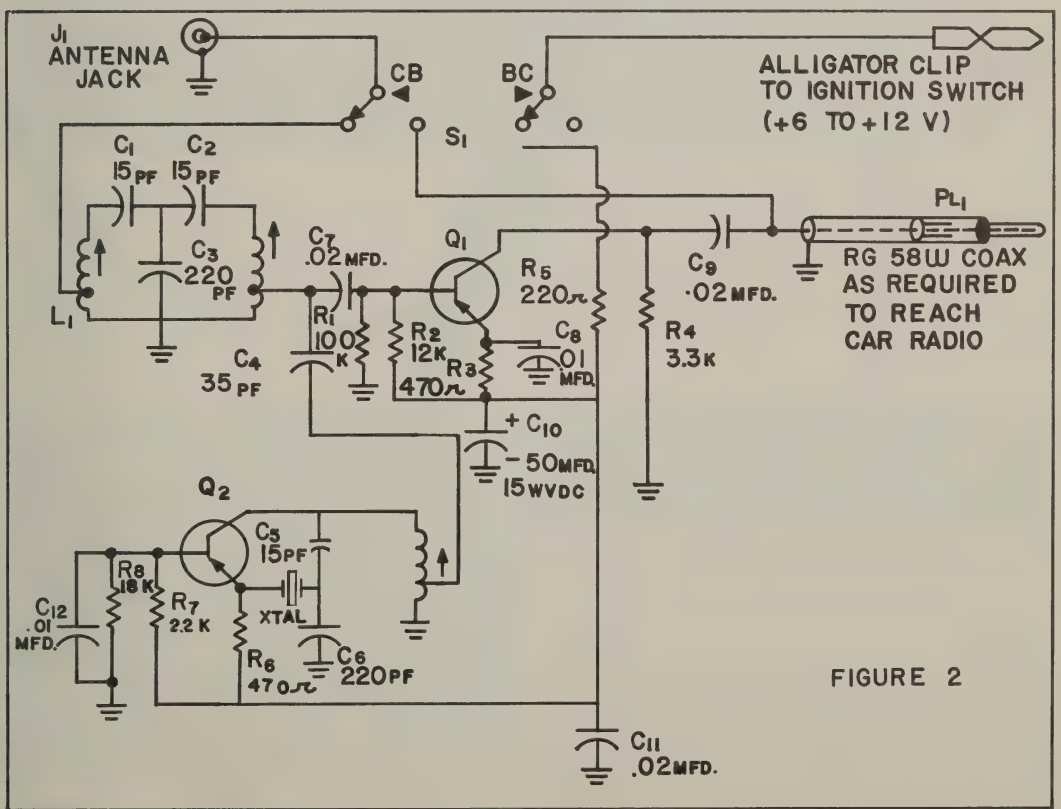
circuitry is designed to be used only with a negative ground ignition system and will work on either 6 or 12 volts. If your car has a positive ground, you can still use the converter by substituting eight penlite cells for the regular battery connection. There is sufficient room to mount these inside the case.



Simple method for constructing grounding strips for substitute etched circuit boards. FIGURE 1

Most experimenters don't have the facilities for etching their own board but an excellent substitute can be made as follows: Cut a piece of 1/16" fiber (similar to the base material used on etched circuit boards) to approximately 4¼" x 1¾". Cut several metal strips from a tin can to ⅜" width and form the material around the outside edge of the board. Solder the corners as shown in fig. 1. This continuous strip serves as a ground for all the common points in the schematic, fig. 2. The components can be mounted by drilling tiny holes in the board, inserting the leads and bending them at right angles. When soldering the connections, be sure to use insulated sleeving wherever wires cross.

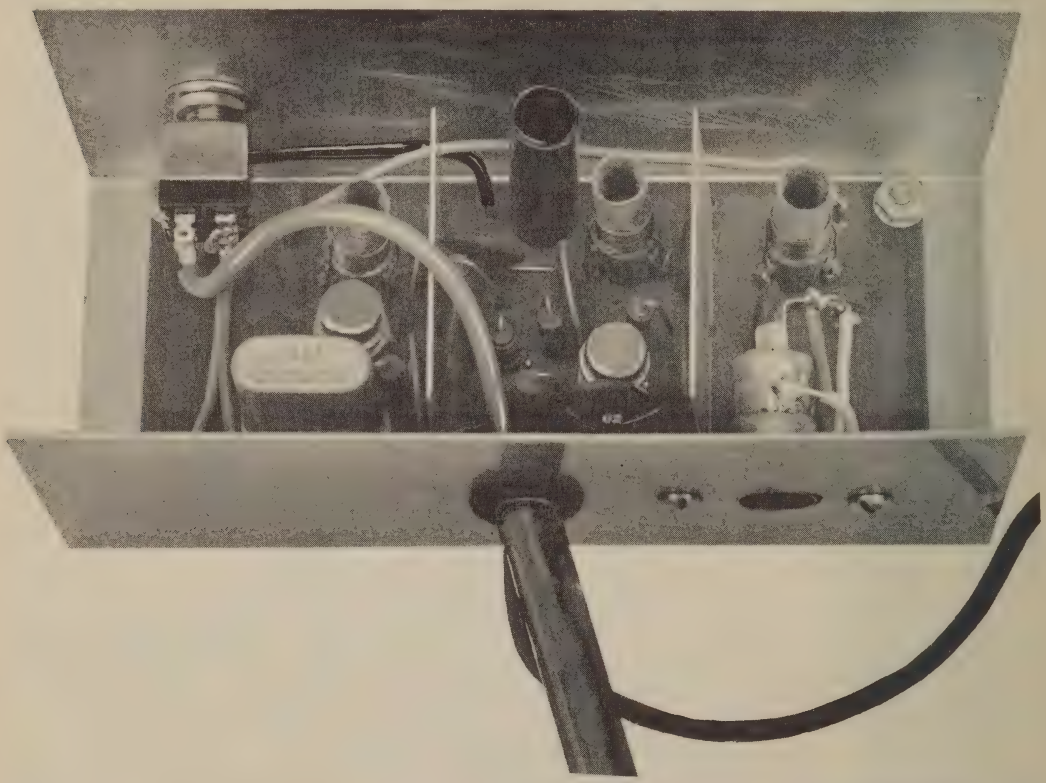
The converter was installed in a 2¼x2¼ x5" L. M. Bender box. The circuit board is easily mounted in the box using ¼" spacers. Lay the converter on the box and mark the four corner holes, drill and mount with 4/40 hardware. Do not tighten the bolts excessively for this can break the fiber material. Drill a ¼" hole in the front panel for the switch. In the center of the rear apron drill a ⅜" hole and install a grommet. Next to this hole, install an antenna connector which matches the one in your car radio. Most radios use a fitting called



Schematic diagram for the CB Mobile Converter

PARTS LIST

C1, C2, C5- 15 pf. 5% NPO disc
C3, C6- 220 pf. disc
C4,- 35 pf. 5% NPO disc
C7, C9, C11- .02 mfd disc
C8, C12 .01 mfd. disc
C10- 50 mfd., 15 wvdc electrolytic
J1- Antenna connector (male Motorola type)
L1, L2, L3- 16 turns, #26 enam. wire, closewound on5/16" slug tuned form, tap at 1½ turns from ground end.
PL1- Antenna connector (female Motorola type)
L1, L2, L3- 16 turns, #26 enam. wire, closewound on 5/16" slub tuned form, tap at 1½ turns from ground end.
PL1- Antenna connector (female Motorola type)
Q1, Q2- SO-65 or R-425 transistor (Texas Instruments, see text)
R1- 100 K, ½ watt
R2- 12K, ½ watt
R3, R6- 470 ohms, ½ watt
R4- 3.3K, ½ watt
R5- 220 ohms, ½ watt
R7- 2.2K, ½ watt
R8- 18K, ½ watt
S1-DPDT toggle (Lafayette SW-76)
Xtal- Third overtone xtal near 28 mc. (see text)
Misc. parts- chassis box (LMB #J1878), length of RG-58/U, xtal. socket, two transistor sockets, alligator clip, ⅜" grommet, hardware as required.



Bottom cover and sides removed, the Stoner 11 meter converter. Check parts layout against positioning shown in figure four on page 34.

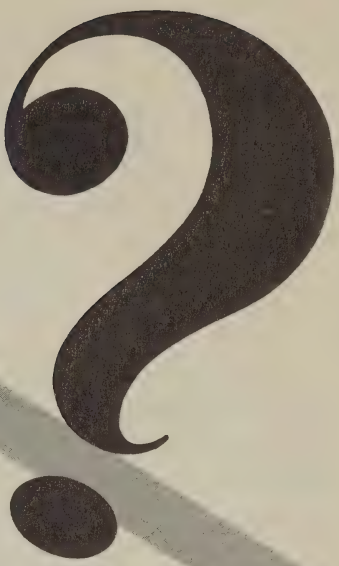
a "Motorola jack". Connect the power and signal circuits to the terminals as indicated on the diagram. Use RG-58/U or similar coax cable to connect the converter to the car radio. The length is not particularly critical.

Tune-Up and Operation—After the converter is wired and connected to the car radio the antenna and r.f. coil (L1 and L2) should be peaked for best reception. If you do not immediately hear stations it may be necessary to change the setting of L3. This coil is also peaked for maximum signal strength. A milliammeter connected in series with the battery lead will indicate approximately 4 ma. when L3 is *incorrectly* set, and 6 to 8 ma. when it is *correct*. You should be able to hear many CB stations around 860 on the dial.

Obtaining Components—As mentioned earlier, the converter can be purchased from International Crystal. However many homebrew artists will have sufficient parts in the junk box to construct the converter with a minimum of strain on the family

(Continued on page 34)

Before you clutter up your roof with a cumbersome antenna of unknown quantity...



see the all new

Stinger *Fixed Location CB Antennae . . .*

The only antenna designed specifically for this use . . . the STINGER is an entirely new concept of Control or Fixed Station antennae . . . FACTORY GUARANTEED to perform according to set specifications.

The all new STINGER explodes the myth that fixed station antennas must be large, cumbersome, ugly additions to the roof;

- Attractive, contemporary design.
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The perfect complement to the Stinger Control or Fixed Station antenna is the fast selling, hardworking mighty mite . . . The STINGER Mobile Whip . . . 32" of dynamic CB antenna . . . it completely outmodes more expensive, cumbersome, conventional whips and loaded coil antennas . . . AND it is Unconditionally Money Back Guaranteed to outperform these old fashioned mobile antennae systems.
Costs less to buy . . . is easier to install . . . makes signals more audible . . . transmits and receives further on both high and low frequencies.

For further information about the fabulous, compact, STINGER Control or Fixed Station Antennae, or for your nearest Stinger dealer, send this coupon to:

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DISTRIBUTION INQUIRIES INVITED

A DO-IT-YOURSELF HIGH-PERFORMANCE ANTENNA

By Sidney L. Reynolds, 18W2905

You undoubtedly have heard before that —especially with our low power limit—a good antenna is the secret of reliable coverage. A quick glance through our advertising pages will confirm that many firms are ready to sell you that "good antenna."

The antenna described here, though, offers two features not to be found in any commercial design—you can put it together from start to finish in a few minutes using materials obtainable in almost any hardware store, and the total cost is less than $10.

An additional feature found only in more -expensive commercial affairs is that this antenna offers a perfect match to the conventional 52-ohm coax feedline; most ground-plane designs give you an approximate 2:1 standing-wave ratio, which at best hampers your system efficiency and at worst can destroy parts in your transmitter.

The one disadvantage of this design is that it requires guy wires. This may make it unattractive to you, but keep in mind that a well-guyed mast will stay upright in winds which would topple the strongest self-supporting tower. This antenna has withstood 60-knot gusts with hardly a shake, while nearby billboards toppled to the ground.

Ready to build it? *Let's go!*

You'll need the following materials: two 12-foot lengths of 1x2 lumber, free from knotholes and cracks; one 10-foot length of aluminum or steel TV masting (1¼-inch diameter tubing will do but may cost more); 100 feet of plastic-coated nylon clothesline (*not the kind with a metal core*); 40 feet of No. 14 stranded copper wire; and four egg-type antenna insulators. Not included in the list is hardware to hold the bottom in place; we used iron angle brackets and lag bolts, but a similar footing could be made from two chunks of 2x4 lumber. You'll also need at least three ¼-inch by 2-inch stove or aircraft bolts and nuts to match.

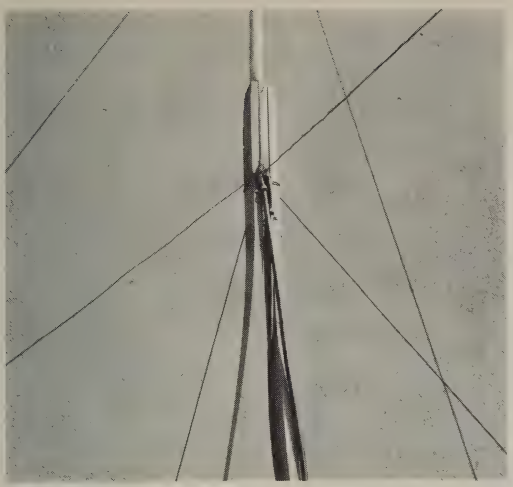
Begin by cutting the 10-foot tubing to a length of 8 feet 3 inches. This gives good performance over the entire band. Next, flatten 18 inches of the tubing at one end, by clamping it in a vise.

Now sandwich the flattened end of the tubing between your 1x2's and clamp the whole sandwich while drilling three ¼-inch holes through. When the holes are drilled, use the three bolts to secure the sandwich firmly.

The next step is installation of the radials. Drill two ⅛-inch holes through the 1x2's, a half inch below the bottom of the flattened tubing. Cut two 20-foot lengths of No. 14 copper wire, and thread them through the holes. Attach an egg insulator to each free end, measuring 8 feet 11 inches from the bottom of the flattened tubing to the center of the egg insulator. Connect all wires together at the crossover point by wrapping a scrap of wire around each radial and soldering the joints.

At the free end of the 1x2's, tack a 3-foot spacer to spread the two lengths apart.

Cut the plastic clothesline into two equal



Close-up, construction and wiring of the "under" $10.00 ground plane. Note wooden frame, flattened tubing (at top), ground radials, 39 inch "inductive stub" (tacked on the 2 x 4 and hanging down) and the RG8/U feed cable.

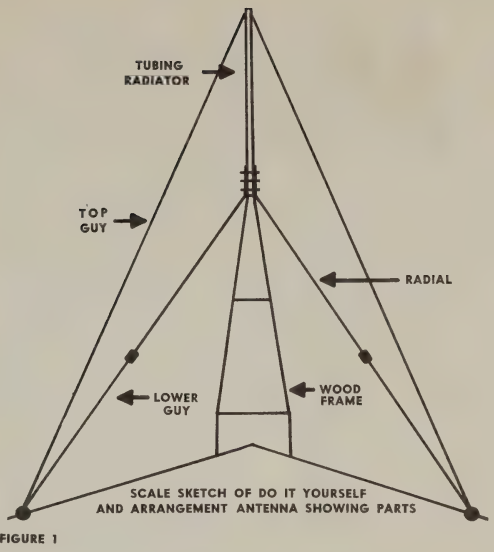


FIGURE 1

Here's how the ground plane goes together.

lengths. At the top of the TV tubing, drill two holes at right angles and thread the clothesline through. Tie a knot at the midpoint of each length, inside the tubing, to keep the line from slipping in either direction. This completes the preliminary mechanical work, leaving only the electrical connections and the job of getting the antenna into the air.

(Continued on page 47)

18QA CALLS NOW BEING ISSUED

The 18th call district has run its gamut with the FCC and the last available 18Q call (18Q9999) was issued by the FCC October 16. Immediately following 18Q9999 was 18QA0001, issued to the American Oil Company, Chicago, Illinois. This is the first time the FCC has completely used up 9,999 calls within a call district in less than 12 months (the first 18Q call was issued January 1, 1961).

The Commission had previously announced it would go to QA series calls if and when the CB population of one district reached the magic "9999" number. The 19th Call district will reach the "QA" status by the time you read this report.

"R" series calls (i.e. 1R0001) will be issued to all CB'ers licensed between January 1, 1962 and December 31, 1962.

You will get full details of this and other stories exclusively in the 1962 "CB Class D Call-Book-Handbook," available exclusively from Horizons Publications.

CB MODIFICATIONS

Hundreds of CB'ers write Modesto Mike every week asking for an article describing "modification of this rig," or "adapting that rig". Interest must be very high in rig modifications . . . and we suspect a good deal of solid experimental work is being done in the field by CB'ers.

Here's how you can earn $5.00, $10.00 or even $25.00 by telling Modesto Mike all about your most recent or favorite modification. Just drop us a line giving full step-by-step details on what you have done to your rig, antenna, mobile or whatever to make it better. Be sure to include a photo if one will show the exact nature of the work you have done, and a schematic of the original and modified circuit. Every modification used will earn between $5 and $25 for its inventor-writer, a darn good way to earn a few sheckles for that new antenna or mobile. Address your modifications to *"Mike's Modifications, P. O. Box* 3150, *Modesto, California."* All submissions not accepted will be returned within two weeks. All modifications accepted for printing will net checks for the CB'er within 15 days of acceptance.

10-7

THE JERSEY 5 WATTERS CB AND HAM JAMBOREE

By Herb Friedman, 2W6045
Eastern Technical Editor

To paraphrase an old song, *"Oh - the CB'ers and the Hams can all be friends"*; and they sure were at the Jersey 5 Watters' CB-Ham Jamboree. As we drove within receiving distance of the jamboree, both our CB and 6 meter mobile rigs virtually "exploded" with signals—and the operational activity continued all day without a break for a breath.

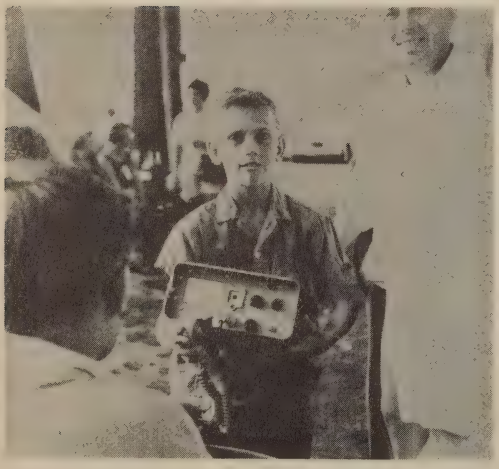
Jack Orlovsky, 2W3470, and his J5W's had quite a jamboree going; under the main pavillion was displayed (for use too) enough Ham and CB equipment to last a lifetime, CB rigs, Ham rigs, antennae, meters, phone patches, tuning adaptors, everything you can imagine.

And the door prizes ! ! ! A veritable mountain—it took 2½ hours to distribute them—and most of it was top quality, donated by (among many others): General Telephone, Lafayette Radio, Eico, Sonar, Lakeshore, Antenna Specialists and Polycom.

The J5W's even prepared for a heat wave which came on schedule. They selected grounds with a pool, and many an operator had to be dragged back to the show.

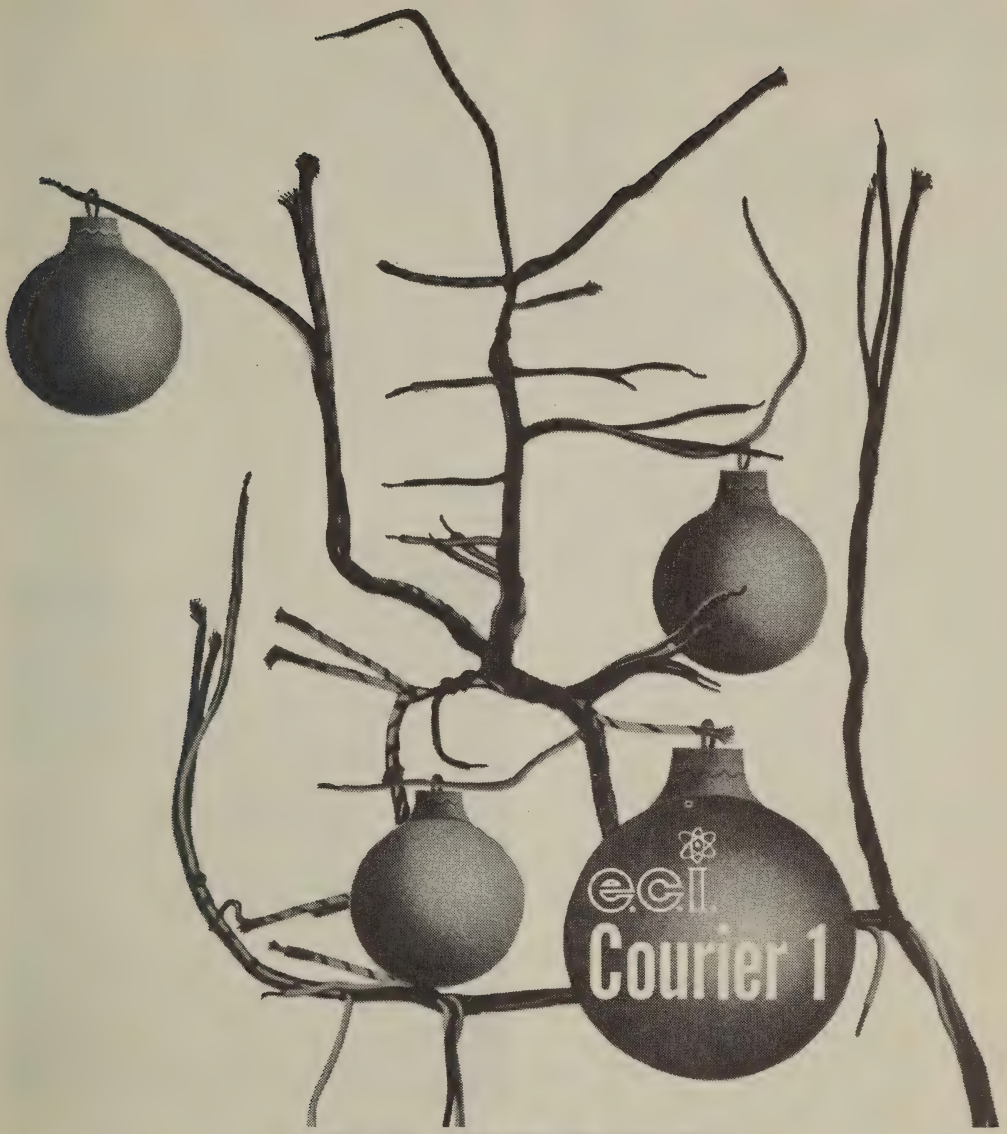
The high point of the day came during the raffle when Rory Read, the 1959 Cerebral Palsy Poster Boy won a handi-talkie. His smile as Jack handed him the prize was so w-i-d-e, everyone just plain forgot the heat.

It was quite a day. 10-7

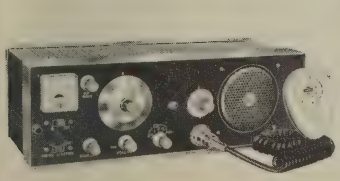


Those are real tears on Bob McManus, the 2W7105 Jr. op., as he collected the Polycom he won.

The highpoint of the day. Rory Read, 1959 Cerebral Palsy Poster Boy wins a handie-talkie. (Jack Orlovsky on right)



CB TREE? It's actually the e.c.i. Courier 1 hand wired harness that ties together its five individual segments into a unitized chassis for simple installation, use and maintenance. And that's only part of the e.c.i. Courier 1 quality story. Think of every conceivable feature you need and want in a CB transceiver that will still get out more than 3 watts . . . e.c.i. Courier 1 has them. See for yourself.



- TRIPLE CONVERSION
- 12 CHANNEL TRANSMITTING
- FIXED & TUNABLE DRIFT-FREE RECEIVING
- BUILT-IN NOISE LIMITER & SQUELCH
- ELECTRONIC SWITCHING (no relays)
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- MOBILE OR BASE (117 V. and 12 V.)
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write for free brochure

$189.50

Slightly higher west of Rockies

e.c.i. **electronics communications, inc.** 325 no. macquesten pkwy. mt. vernon, n.y.

NEW CB PRODUCTS OF THE MONTH

Browning Labs is coming out with a 23 channel crystal switch to be placed in existing 'S9" transmitters. This is being announced to "S9" owners at this time.

Within the next 30-40 days Browning will introduce a new transmitter. This one will consist of a super-duper fantastic circuit including a built-in provision for up to a 23 channel switch. Price is as yet unannounced. Browning hangs out their antenna at Nashua, N.H. (no street number required.)

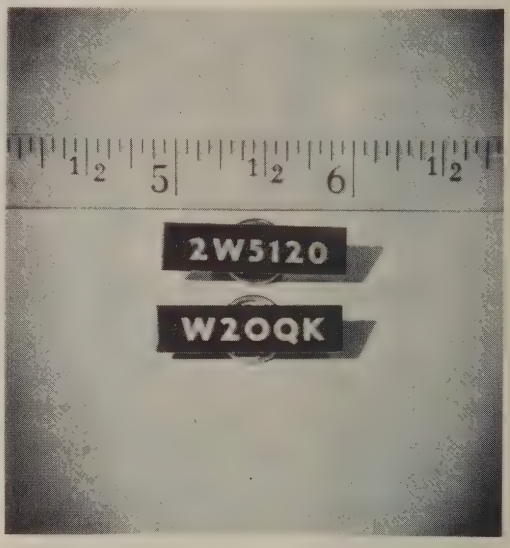
Two-Tone Electronics (250 N. Coronado, Los Angeles, Calif.) will shortly bring out a novel mobile whip called the GET-MORE WHIP.

By now you've seen Polytronics' new "Nuvistor" rig. The Nuvistor is an RCA development which replaces tubes. They are more sensitive than tubes, smaller, and have a lower noise figure.

Nuvistors will shortly become familiar devices in CB rigs—leading to smaller and smaller units without any sacrifice in efficiency. When you add this to the fact that several companies are working on miniaturized antennas for base stations (Stinger's is just out), you can see that while CB is getting bigger it is also getting smaller.

Here's a CBH scoop—the manufacture of Morrow's CB units has been taken over by Davis Communications of 2072 La Jolla Dr., Stockton 4, Calif. Davis will complete production on the Morrow sets which they took over in incomplete condition and then bring out a new unit under their own name. The new unit will have the same basic design as the Morrow but some new features and circuit modifications. They're looking for dealers.

The Mahler Research Foundation, P.O. Box 1159, New York 1, N.Y. has just announced a new item. This time they've worked up a lapel pin with your call on it. The pins are made of aluminum and your call is etched into it (permanently) over a black, red, or blue background. They are ¼" wide by ¾" wide with a screw holder on the reverse side. There is a minimum order of 2 pins (you may mix colors and calls) and you should allow a few weeks for delivery. Cost is $2 each (enclose check or M.O., specifiy color desired). Also made with 24K gold letters on a brass pin with black background for $2.25 each.



Mike cords wrinkled and full of kinks; connecting cables dragging behind portable gear as a long tail—sound familar? Well take a look at the picture—those aren't "factory equipped" cables, and we didn't have to have an "in" with a manufacturer in order to get them. The Alpha Wire Corp., recognizing the long standing need for easily obtainable retractile cables has made a wide selection of them available through your local electronics parts dealer.

The CB'er, and experimenter can now purchase virtually any retractile cable he needs—shielded mike cable for economy transceivers, and even shielded cable with separate control wires for *really* hum free

"home brew" push-to-talk circuits. And to make portable equipment really portable, retractile *power* cables with or without plugs.

Whatever your requirements, there's a retractile cable available from your Alpha Wire dealer.

Elenco Power Gainer

Here is a unit manufactured by Electronic Engineering Company, Wabash, Indiana which really makes sense. It's called the Power Gainer, and here's what it does. The Power Gainer takes the high portions of the human voice and amplifies them to the same level as your stronger bass portions of the voice. This is all done electronically, and re-inserted on the modulated carrier of your signal, resulting in four times more talk power! This is the equivalent of running 20 watts final power, and yet it's legal, completely! Find out more about this amazing device direct from the manufacturer at the address above. The price is $45.00, which is mighty cheap for "effectively increasing your power input by four times." 10-7

The CBH Lab Reports . . .

WE TEST

- ★ **ECI Courier-1 Transceiver**
- ★ **Sonotone CM-30 Microphone**
- ★ **Hammarlund HQ-105TR**
- ★ **Eico 740 Walkie-Talkie**
- ★ **Sonar Model E Transceiver**

REVIEWING THE ECI COURIER-1

By Herbert Friedman,2W6045
CBH Eastern Technical Editor

After having our appetites whetted by advertising and rumor, we finally got the chance to test the ECI Courier I ($189.50), and we must say we were not disappointed —it's quite a rig.

The heart of the Courier is the receiver, which in every way performs as a top quality communications receiver would. The Courier is variable tuned or four channels fixed tuned. The dial is precision calibrated

for *each* channel, making pre-set tuning dependable. Drift free triple conversion is used, with the first conversion oscillator crystal controlled. The final IF amplifier is two stages of 262 kc., resulting in selectivity which is phenomenal. When the Courier receiver was tuned to a channel 9 signal generator delivering an S2 signal (on the Courier's "S" Meter), there was no CB signal on channel 8 or 10 which interfered, and the 8 and 10 signals were running over S-9.

To prevent overload from mobiles "parked under your window," an RF gain control is provided. The squelch has a "medium speed action," it can be set so that if you desire, a slight background noise will always be heard.

The noise limiter, which has an on-off switch is very good. The receive audio quality is very clean and sharp.

An unusual feature is fixed channel reception using no crystals. There are four trimmer capacitors which can be preset to any desired channel; in addition, the fixed tuning is front panel variable ± 2.5 kc. With the transmitter "on," the trimmers are adjusted for maximum S-reading to the signal being transmitted. This is a good feature considering the crystal costs saved.

The twelve channel transmitter is as good as the receiver. When checked with our SECO 510, the transmitter delivered considerably over three watts. (we didn't believe it so we checked with a Bird wattmeter and got a reading of 3.6 watts.) Modulation was very clean to 100%.

The Courier's S-meter doubles as a relative power meter, permitting you to tune-up the transmitter to maximum output without the need for external indicators.

The power supply operates off either 117 volts a.c. or 12 volts d.c.

Our conclusion: A rugged, excellent transceiver in all aspects; well suited because its receiver for use wherever dependable communications are necessary over an extended range or under severe QRM conditions.

10-7

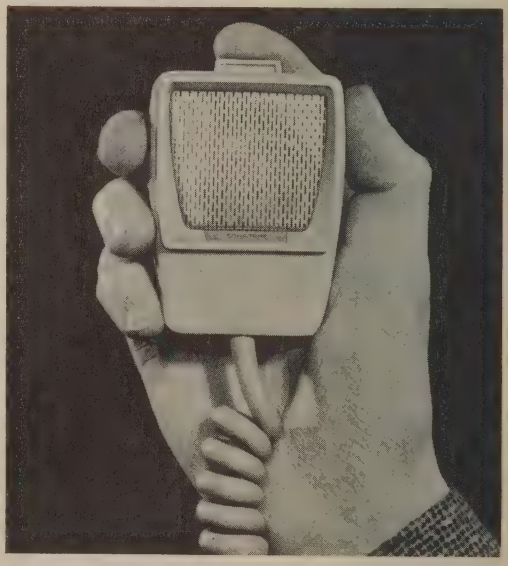
CBH TESTS THE SONOTONE CM-30 CITIZENS BAND MICROPHONE

Just about the time we saw the first advertisements for the Sonotone CM-30 we saw the microphone's response curve and our thoughts didn't jell. The response of the CM-30 didn't match what we considered to be a good response for a communications microphone.

Therefore, to satisfy our curiosity, we decided to test the CM-30.

The high output ceramic element CM-30 has a case made of shatterproof plastic. The coil cord is particularly well made with a shield of regular wire strands rather than the usual tinsel wire—making it very easy to attach a microphone plug.

The two-wire switching circuit, which is normally open is isolated from the microphone shield—an advantage if you are adding an a.c. powered push-to-talk circuit since the possibility of hum pickup in a common shield is eliminated. For normally closed operation one of the switch leads is resoldered to the NC terminal.



Sonotone's Ceramic Citizen's Band "Mike"

The CM-30 has a mid-range peak at 2000 cycles which improves speech clarity. However, there is also a boost at 140 cycles; this in contrast to the bass *attenuation* which is common to communication microphones.

The result of the bass boost is a decided "mellowness" on low register (male) voices. If you prefer a sharp-cutting anti QRM quality, connect a .5 megohm resistor across the mike leads. The resistor loading results in a bass attenuation of 10+ db at 100 cycles. (Actually the bass response can be tailored to your needs.)

On high register voices (women and children) the sound is superb; the usual harshness and splatter is gone—reception on these voices is "smooth" and pleasant.

Our Conclusion

For male communication—a pleasant mellow quality suited to medium and strong signal strengths; not suited to low signal strengths unless resistor loaded.

For women and children—an excellent choice under any condition where clarity and listening ease are important.

H.F.

CBH TESTS THE HAMMARLUND HQ-105TR

The Hammarlund Manufacturing Co., a respected name in communications, has entered the CB field with an unusual rig. To what was a fine communications receiver they added a 5 watt transmitter and dubbed it the HQ-105TR.

The 105 has all the features of a good receiver. The basic selectivity is excellent; in addition a variable Q-multiplier is provided which achieves a degree of selectivity bordering on channel splitting. The noise limiter is excellent; with a station tuned in it is virtually impossible to detect ignition noise even when a mobile is fifty feet away.

An unusual feature is automatic tone control. When the volume must be raised near maximum in order to hear a low level signal the low and high frequencies are attenuated, producing a sharp-cutting quality.

The transmitter is the basic Stoner circuit, a single channel transmitter utilizing overtone crystals. The crystal socket is "in the clear" enabling you to change crystals at will. The modulator has reserve gain, reaching 100% modulation at low voice levels. The 105 does not come equipped with a mike—you select the one having the characteristics you desire. When tested with a Sonotone CM-30 loaded for reduced bass, the modulation was very clean and effective.

The transmitter is controlled by either a push-to-talk or panel mounted switch.

The dial is calibrated by an arrangement which uses the transmitter as a channel spotter.

Hammarlund HQ-105TR

The idea behind the 105 is this: you get a good CB rig for slightly more than the usual cost. If you decide to go into amateur radio you use the same equipment since the transmitter will operate on 10 meters by changing the transmit crystal. If you decide to become an SWL, you have a top quality receiver—three hobbies in one package. 10-7

CBH Builds The EICO 740 Handie-Talkie

Perhaps the major problem with many handie-talkies is their penlight battery power source. Penlights are notorious for being "dead" when you need them most, or, they leak all over the case if you don't check them frequently. No longer need the penlight problem exist. The EICO 740 handi-talkie ($54.95 in kit form including nickel cadmium battery and charger) has several appealing features for anyone interested in a rugged, *dependable* unit.

First off, the kit is well packaged; the small components, which usually wind up drifting about the workbench or kitchen table are packaged in hinged, plastic boxes, making component selection and storage rather easy. The instruction book is excellent, as a matter of fact, it's the best we have ever used.

Building the printed wiring kit presented no problem; while the soldering technique is rather delicate, nothing will go wrong if you follow instructions. Considering the compactness of the 740, there is no place where you need three hands. Total construction time from unpacking through alignment was slightly over four hours.

The coils are pre-aligned and were very close to maximum peak. The non-instrument alignment instructions are not difficult nor are they tedious.

The performance was what you would except fro mthe average, good handie-talkie —good receiver sensitivity, standard output and decent readable audio, both transmit and receive.

The two 'extra' features (aside from price) is what makes the 740 particularly appealing. The power source is a rechargeable nickel cadmium battery which gives up to ten hours continuous service; then you recharge overnight. The second 'extra' is "accidental on" protection. The 740 is designed so the volume is never completely off. A slight background noise is always present, insuring that you do not store the unit with the power on. (You don't appreciate this feature until you use it.)

The 740 is definitely well thought out, giving performance well worth the price.

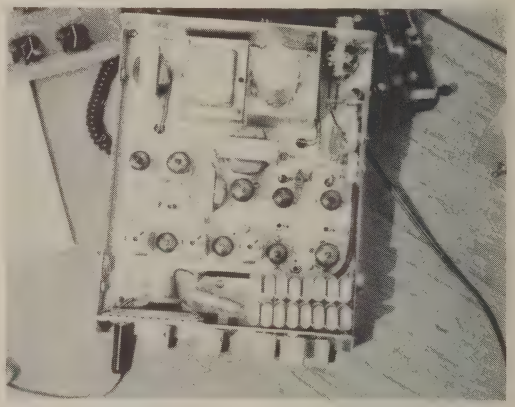
SONAR MODEL E TRANSCEIVER

The CB Horizons lab recently completed the most exhaustive series of checks we had ever run on a single conversion-tunable receiver Class D transceiver. The unit which attracted so much of our scrutiny was the Sonar Model E.

During the summer months the CBH lab attention was drawn to the Sonar Model E after repeated readers reported "here is a tunable receiver, single conversion only, that performs like a double conversion receiver." We contacted Sonar and arranged to run a series of checks on the unit. Ours arrived with transmitting crystals, and receive crystals, for channels 5, 7, 9, 11, 14, 17, 19 and 21.

Sonar's 8 channel unit is a precision piece of radio equipment. It provides the option of using a tunable receiver (standard equipment) or crystal controlled receiving. The unit is one of the most rugged we have ever unpacked from a crate and deliberately dropped to the floor.

Sonar is an old hand at two-way communications equipment. The firm is a longtime established builder of marine communications equipment, and what they have learned in the marine field they have applied to the CB field. The end result is a two-way communications unit for Class D radio that will take the mis-use, bungling and knocking about you would ever give it . . intentionally or otherwise . . and still keep on performing.



Inside the Sonar Model E, the crystal bank for receive and transmit is at right forward, the audio stages at the left center, the receiver IF string at front left, and transmitter at right center. 9 tubes and 6 diodes in all.

First we ran an output check on the transmitter. This varied, on a calibrated in-line watt meter, from 2.7 watts on channel 5 to 2.9 watts on channel 11. On an oscilloscope the modulation hovered between 95 and 100 percent. We applied an audio generator to the audio circuit (mike input) and swung the audio oscillator from 50 cycles per second up to 8,000 cps, holding the output level of the audio generator constant. We plotted what happened to the modulation percentage and quality on our lab scope and were pleased to see a definite audio response peak between 250 cps and 3500 cps. This means the final is modulating closest to 100 percent "within the normal voice range," and the user will get maximum benefit from the rig's "audio punch." This was later borne out in field

tests when the lab "unit two" reported the signal could be copied 100 percent well down into the noise.

The receiver in particular received a good going over. Applying an RF signal generator source to the receiver input, we measured the ability of the tunable (and later the fixed) receiver to copy weak signals *on channel,* at the same time rejecting strong signals only one channel away. What we found is this. A 5 microvolt signal on channel can be copied without noticable or objectionable *splatter* when signals as strong as 300 microvolts are operating one channel removed. In one test period, a 200 microvolt signal was applied to channel 10, and a 100 microvolt signal was applied on channel 8. During this period a 5 microvolt signal from our unit two (mobile) was perfectly readable.

Among the many features you would appreciate on the Sonar are the following:

Antenna Loading control
All aluminum, iridited and treated chassis
Full wave automatic noise limiter
Push to talk
6, 12 or 110 volt operation
Universal mounting bracket (this *really* is great!)
2 microvolt received signal provides 20 db signal to noise ration
4 watts audio output test

Our unit (Serial Number E-968) met and in many cases exceeded all of the specifications the comprehensive manual said it should. We in particular like the squelch control. It is one of the most positive and yet sensitive receiver squelch units we have ever had the opportunity to check out and report on.

All in all, we found the Sonar Model E Class D transceiver one whale of a unit. For business or personal use, it should fill almost every requirement. The price is $179.50, and full information is available from the manufacturer at *Sonar Radio Corporation,* 3050 West 21st Street, Brooklyn, 24, New York. **10-7**

CB and SUNSPOTS

For the fall season 1500-2500 mile skip interference and DX reception, the month of November can't be beat. The slowly improving conditions of the past few months will climax between November 10 and December 5 in most areas of the country. After December 5 long range skip will be on a temporary decline (through late December) while short skip, similar to the type we experienced during the past summer will be on a temporary incline. Here is how individual area conditions shape up.

1W-1Q, 2W-2Q, 20W-20Q, 3W-3Q . . . Daytime skip to western and gulf coast areas, occuring for the most part between 11 AM EST and 5 PM EST.

4W-4Q, 24W-24Q, 5W-5Q . . . Daytime skip to western USA, Rocky mountain states, occuring between 10:30 AM EST and 5:30 PM EST.

6W-6Q, 7W-7Q, 8W-8Q, 9W-9Q . . . Daytime skip prevalent to Puerto Rico, western USA between 10 AM EST and 8 PM EST. Rare openings also to northern New England around 5 PM EST.

18W-18Q, 19W-19Q . . . Occasional, although rare, daytime skip reception from 11 and 12th area stations between 2 PM EST and 4 PM EST.

15W-15Q . . . Daytime skip reception, especially in Utah, from 5, 6 and 7 call area stations, occuring for the most part between noon MST and 2 PM MST.

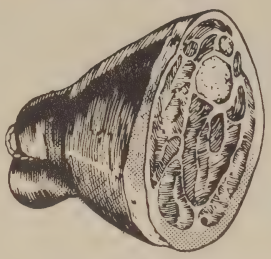
16W-16Q, 17W-17Q . . . No regular DX reception expected. Occasional DX interference from 11 and 7 call area stations around 1 PM CST by 16 call area receivers in North Dakota and Minnesota.

11W-11Q, 12W-12Q . . . Daytime skip to all east coast states likely on 60 percent of the days in the period, with 5, 6, 7 and 8 call stations most frequent visitors. DX may begin as early as 7 AM PST and last as late as 7 PM PST.

13W-13Q, 14W-14Q . . . Daytime skip prevalent from 5, 6, 7 and 8 call area stations. Skip interference may begin as early as 8 AM PST and last as late as 6 PM PST.

'Til next month, *Sunspot ED* **10-7**

ONE 'S VIEW OF CB



By Rod C. Rigg, W6YGZ/WA6IXK
Chief Engineer KCVN-FM

One day a few years back we hams woke up and found ourselves minus the 11 meter band. Our reactions ran the gamut from the fear of encroaching piracy of all our bands to *" . . . so who needs it? Maybe somebody else can make use of it. We still got* 10 *meters, ain't we."* Some of use readily accepted the idea of CB since it was so easy to get a "ticket" and it made it possible to get the beloved, ever resistant spouse on the air. At first a few hams played around on 11 with high power just for "kicks"; how low can you get? Many just accepted the idea and paid little more heed to it.

Then one day came the shock! While tuning across 10 meters to see if the band was "open" we casually decided to run our *Super Whiz Bang, GR-49C,* receiver across the old 11 meter band to see how the CB'ers were taking care of her. With great horror we noticed that a CB station in our community was receiving his mobile 25 miles out and we couldn't even get a beep with the "bfo" turned on! This first situation could be explained away as *"conditions"* or *"dead spot,"* but when it happened repeatedly it became evident that we would have to look for other explanations. This had the ring of a challenge so we whipped together a dipole cut for 11 meters, mounted it vertically, and valiantly set forth to show 'em how it was done. Our illusions shattered we came to the final realization that the old *Whiz Bang* just wasn't whizzing and wouldn't cut the mustard on 11 meters.

An examination (frenzied) of the equipment being used by CB'ers revealed that there were no maser amplifiers or tunnel diodes or other super circuitry being used; it was just a simple matter of getting the most out of fairly conventional equipment. Receivers are getting hotter and hotter every year because the CB'ers is demanding it. Here's where good old American business competition really pays off. "We get better mouse traps and rigs or we don't buy your stuff." At first the range on CB was pretty bad and this made the band almost useless for anything more than five miles away, but a lot of experimentation was done (much of it by CB'ers) and little by little the efficiency of the outfits came up.

CB-Ham relationships from the first have been a little strained. Hams claimed that many of the CB'ers were trying to sound like hams, and 11 meters just wasn't supposed to be a ham band anymore. A few CB'ers were caught playing the DX angle, but this point was subsequently clarified by the FCC. In retaliation to the scorn and criticism, the CB'ers pointed out that hams were interested in seeing how well they got out, and how many contacts or how much DX they could land. CB'ers almost typically paid little heed to what was being said to them.

"Hah, what do you CB'ers know about radio?"

"Yeah, what do you hams know about efficient communication?"

Some pretty telling blows were exchanged with just enough truth to them to make some of us re-evaluate our thinking on the matter. The CB'ers were taking

a tremendous interest in the operational aspects of radio communication and were even working with Civil Defense. Mobile activity was at an all time high as compared to ham radio mobiles and perhaps some of us were just a bit jealous. We have come to realizes that mobile work is the *essence* of CB and only *one* phase of Amateur radio.

The differences that exist between ham and CB'ers are largely the result of a lack of understanding of the purpose of the Amateur and Citizens' radio services. Our Amateur club has had the good fortune of having members who are at the same time hams and CB'ers. Although they are good hams in the best of Amateur radio tradition, they invariably spring to the defense of maligned CB'ers. The thing that is hardest for us hams to explain away is the efficiency with which the rascals carry on communications.

Some of the ideas for service to the community in case of emergency put forth by Citizen's Banders sounded very much like similar ideas put forth by hams. The difference lies in the CB'ers ability, readiness, and willingness to carry them out. While it is true that most of the CB equipment is manufactured, a high percentage of Amateur gear is also "store bought" A disadvantage of the Amateur service in an emergency is that portable and mobile equipment are often not in service at the time it is needed and not all of the mobiles operate on the same band. On the other hand, the Amateur can operate band where great distances can be reached with great ease. The Amateur has an excellent record of service in time of need, and it looks as if CB'ers will be sharing the honors for public service very soon. We hardly expect any complaints on that score. During skip conditions several CB'ers were heard helping out during the hurricane emergency. Hats off for a fine job.

Getting back to the hamming-on-CB problem (and it still is a problem as any serious minded CB'er will tell you), it would seem like a fine idea to invite these rule benders to become licensed Amateurs and do some hamming for real and share the fun with us, but for some reason there has been quite a bit of resistance to this idea among them. Many CB'ers *have* jumped the hurdle and are enjoying amateur privileges, but many others who are potential hams don't believe they will be welcome among the ranks. Perish the thought. Stand up and be counted. Many CB'ers with ham tendencies believe the tests for Amateur licenses to be too difficult or too much trouble. They are either continuing to rag chew on CB or just hoping something will happen someday to make it legal to rag chew and DX on 11 meters. The true-blue CB'er deplores this misuse of 11 meters and will freely vocalize on this point, just ask him.

The CB'ers limitations of power and antenna heights have caused many hams to look with envy at their accomplishments. We have been rapidly working over our 6 and 2 meter gear to see what can be done. With our freedom of antenna height and transmitter power we should be able to far exceed, not just rival, the CB'ers success. We sincerely hope some of you CB'ers will share the fun of discovery, experiment, and rag chewing on 6 and 2 meters.

CB'ers—Increase Your CB Talk Power 4-Times!

- Simple Connections To Any CB Transceiver or Transmitter
- Meets All FCC Requirements **—Perfectly Legal!**
- Use With Mobile Or Base!
- Many CB'ers Report 50-100 Percent Increased Range!

HOW IT WORKS

The ELENCO Audio Compression Amplifier "super-modulates" your final amplifier stage effectively giving a four-times increase in carrier power. Like going to 20 watts input! Yet the rig input remains at 5 watts, and modulation at or below 100 percent.

The ELENCO Power Gainer
Only $45.00

Order Direct From Factory or See Your Local CB Equipment Dealer
ELECTRONIC ENGINEERING COMPANY, WABASH, INDIANA

CB TECH TALK

THE "Q-BIRD" AND "TURKEY CALL" FIGHT IT OUT WITH INTERFERENCE

by
Tommy Bourdeau, 9W0363
Corpus Christi, Texas

Perhaps you have wondered what strange breed of electronic bird is loose on the 11 meter band calling his friends hither and yon with a "gobble-gobble-gobble" or "blip-de-bloop, blip-de-bloop."

Or per chance you are one of the many CB'ers who know that this strange sound, which seems to becoming more popular by the day, is an electronic signaling gadget designed to cut through QRM (station interference), skip and high noise to let "your unit two" know you are on the air looking for him.

The original electronic signaler in the CB service appeared as a regular feature in the General Radiotelephone Company's MC-3. (2806 W. Burbank Blvd., Burbank, California) The people at General felt that with CB interference becoming more intolerable by the day, a method was needed to notify one's units that a call was being attempted.

It is a matter of legend that the "Electronic tone signaler"" in the MC-3 caught on like wildfire. Soon an outfit in Los Angeles went into business manufacturing a similar sounding unit called "The Q-Bird." The Q-Bird could be wired into any set in a matter of minutes, and cost approximately $3.50 from the manufacturer. Early readers of the first issue of CB Horizons may remember the first announcement that the Q-Bird was available through a small classified in the June issue.

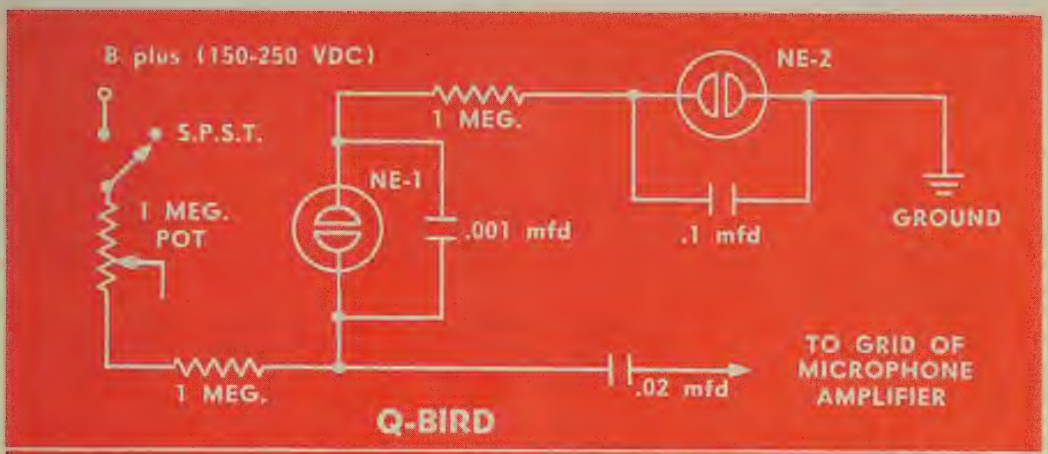
With the Q-Bird on the market and the General MC series sets selling like hotcakes from Maine to California, the sound of the "electronic caller' became commonplace on the band. But *not* so commonplace that it lost all of its value as a signaler.

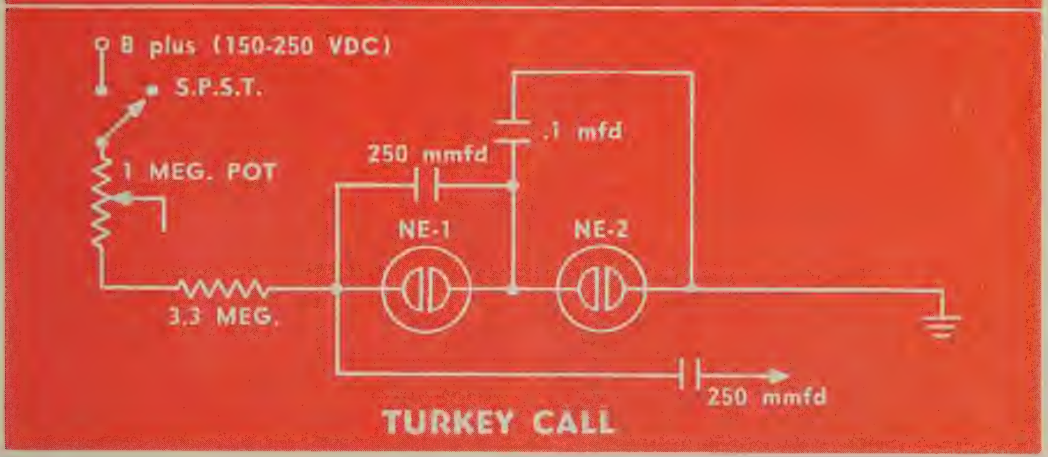
For example the first units were sold on the premise that "you needed one to notify your unit two that you were calling." But when more than one station had a Q-Bird, or whatever, you couldn't be sure that someone else wasn't trying to reach *their* unit two!

Today everyone wants an electronic tone signaler . . . and as a sign of the times the original tone signaler offered in the General series of sets has been enhanced by not only the Q-Bird, but also by the CB-Beeper (available through Martin Development Company, P.O. Box 82, San Antonio, Texas) and most recently "The Electronic Turkey." Quite frankly each has its place, and we will undoubtedly see modifications of these units as more manufacturers enter the field in the year ahead.

On the premise that you yourself might want to build an electronic signaler (and call it a Turkey, Q-Bird, CB-Beeper or whatever—they all sound essentially alike) for your CB station, here are two popular designs. One is a slightly modified Q-Bird, while the other is my original Electronic Turkey.

The tones these units transmit on your carrier will be controlled by the amount of B plus voltage (high voltage) you apply to the B plus point on the circuit. If you are a wild eyed experimenter, place a potentiometer in the B plus circuit and vary your tone as you are calling. That will give your station a truly distinctive sound!





The slide switch or DPDT switch on the left hand side of **both units** turns the signaler on and starts the tone operating. With no B plus applied to the tone circuit (which is actually essentially a relaxation oscillator) you operate your push to talk and microphone or transmit-receive switch as usual. The switch on the signaler activates the signaler only, and is turned on for a few seconds as a calling method **after** the station carrier is on.

PARTS LIST

ELECTRONIC TURKEY

All parts plainly marked. Mount parts on a piece of fiberboard or plastic. All condensers 1,000 volt rating.

Q-BIRD

All parts plainly marked. Mount parts on a piece of fiberboard or plastic. All condensers 1,000 volt rating.

with 1 pair of crystals, microphone and power cables

$179.50

NOW...Tomorrow and for years to come!

Sonar CITIZENS BAND RADIO

• 8 Channels, crystal controlled transmitter and receiver • Tunable receiver for 22 channels • Transmitter 100% Class B modulated • Adjustable squelch • Automatic noise limiter • R. F. Power indicator • 1 Year guarantee • Easy to install. Ideal for home, boat, car or business. Weighs only 9 lbs...4¾ x 9½ x 11¼ • FCC Type accepted* (*in preference to only certification).

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Please send me complete information on Model "E" CB Radio.

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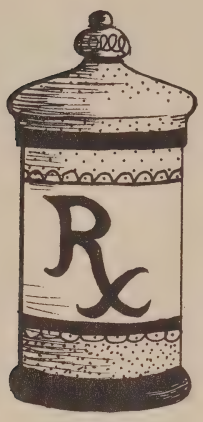
ADDRESS_____

CITY_____ STATE_____

CBH Club of the Year Award



For Goodwill...

TRI-COUNTY NET AND PUBLIC SERVICE!

BY DONALD MacLEOD, 1W8438
MURIEL BRUMAGE, 1Q2576

The night was cold and clear and the temperature outside hovered around the zero mark, as the car sped north on Highway 16. The moon on that Sunday night in mid-February had long ago settled low in the southwestern sky, leaving only the shimmering illumination of the bright winter stars to pave the snow crusted fields either side of the lonely highway.

Conversation was light for it was late and the eyes of the passenger and driver alike were riveted on the beaming shafts of light as the headlights pierced the blackness of the night. Rounding a turn, the twin beams suddenly picked up first one object and then another more than 150 yeards in the roadway ahead.

Applying his brakes, CB operator, Lynn Brumage, 1Q1248 of Portsmouth, New Hampshire saw two cars that had just been involved in a violent head-on collision.

Picking up his microphone, he called 1W8438, requesting immediate response for an emergency transmission. The call was answered by Rita MacLeod at 1W8438 in Dover, New Hampshire, (twenty-five miles away) who immediately summoned State Police aid and ambulance service. Leaving his car, Lynn then went to the assistance of the accident victims while his wife, Muriel (now 1Q2576) remained at the microphone to relay further information to 1W8438 as requested by the State Police pending their arrival on the scene. Also assisting in handling the relay of messages was 1W4557, James Dill of Somersworth, New Hampshire.

Upon arrival of the ambulance crews, four seriously injured people were removed to the hospital, and yet another routine task for the mobile and base units of the Tri-County Emergency Communications Net was an accomplished fact.

Tri-County, as the club is known throughout the northern New England area, was formed in December of 1960 at Dover, New Hampshire by a group of CB operators who had previously worked together on a fire alarm patrol initiated by the Fire Chief of that community to spot and track-down those responsible for an outbreak of false alarms.

For several nights—from dusk to dawn—these CB volunteers; twenty strong from several communities in Maine and New Hampshire, secretly maintained watch on fire boxes through the city, and by the time the watch was called off, two violators had been reported and apprehended by the police.

Reluctant to terminate the bond between them formed during the long lonely hours of vigil of these few nights, they arranged a meeting, deciding to form an emergency

Highway Patrol Director, Larry Allen, 1W9038 and Police Captain Stanton Remick of the Portsmouth Police Department shown receiving a report from Tri-County Secretary, Robert Durnin, 1W7200 following a highway patrol during a manhunt.

group and set about to write a constitution and by-laws.

No sooner had they made their decision than the first real problem arose, these CB'ers came from three separate counties within two different states. Therefore, it was evident that to attempt a tie-in with any municipal, county or state CD agency would prove out of the question.

It was during the first meeting that they decided to form an emergency group, capable of legal operation across county or state lines. The answer was simple; incorporate as a charitable, non-profit organization under the laws of Maine and New Hampshire, the name of the new association, naturally, *Tri-County Emergency Communications Net, Inc.* The letterhead states "serving Strafford and Rockingham Counties of New Hamphire and York County, Maine."

Organized at last, incorporated legally and armed with a constitution and by-laws, the club swung into high gear. From an early beginning of thirty-three charter members, the club has now grown into a compact, well equipped and efficient emergency group of more than eighty CB mobile units.

Within the past seven months they have answered more than a hundred emergency calls for State and local authorities as well as calls for assistance by local civic groups, for the mobile radio controlling of parades and other public functions.

One of the most important functions of the group has been the storm patrol during severe New England blizzards. These storms, with winds of whole gale or hurricane force driving sleet and snow before them and temperatures ranging down to thirty-five degrees below zero, have long been a source of real trouble in the New England seacoast area.

With thousands of winter vacationists and sport enthusiasts invading this section daily, many ill-equipped for winter travel, the

Muriel Brumage, 1Q2576 shown directing Tri-County Parade and Traffic units during the New Hampshire State American Legion Parade assisted by Officer Edwin Capone of the Portsmouth, N.H. Police Department.

GETTING STARTED IN CITIZENS RADIO ?

THERE'S NO BETTER BEGINNING THAN INSTALLING A MOSLEY BASE STATION ANTENNA! FOR EFFECTIVE PERFORMANCE – FOR RUGGED DURABILITY – CHOOSE MOSLEY . . . LIKE THE EXPERTS DO!

NEW! A low-cost omnidirectional ground plane with features usually found in much more expensive types. This unity gain base station antenna will provide years of dependable, effective and maintenance-free performance!

Model V-11-UGP
Net Price, $21.95

FEATURES:

- 100% Rust Proof!
- Heavy-Wall, Heat Treated 6061-T6 Aluminum Elements!
- Entire Antenna Grounded for Positive Lightning Protection and Improved Signal to Noise Ratio!
- "Cycolac" Base Supports Vertical Without Guys in Winds Up To 75 mph!
- Low Angle of Radiation for Greater Range!
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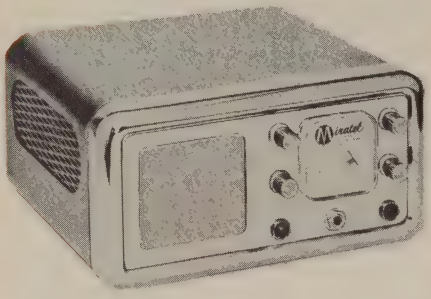
Mosley Electronics, Inc.

4610 NORTH LINDBERGH BOULEVARD - BRIDGETON, MISSOURI

New!

FROM MIRATEL



DELUXE CB UNIT

- Five channel transmit and receive
- Front panel available in any one of five colors: Red, Blue, Black, Green or Maroon to complement your vehicle's interior decor. Chrome trim.
- Front panel meter used as "S" meter on receiver, indicates carrier output and percentage of modulation on transmit.
- Front panel meter adjust control.
- Up to 7.5 watts of audio power available.
- Chrome push-to-talk Hi-Gain dynamic microphone.
- Units available for 117 VAC - 12 VDC or 117 VAC - 6 VDC.
- Silicon rectifier power supply.
- Competitively priced at **$198.50**

Special model with mechanical filter is available at slightly higher cost.

Miratel INCORPORATED

Richardson St., New Brighton 12, Minn.

Distributor and Dealer Inquiries Invited

problems of the various law enforcement and public safety officials have increased a hundred fold.

Here was an opportunity for the newly formed group to provide a real and necessary public service. Taking time off from their regular jobs and with several base units on practically twenty-four hour duty —manned by wives—club members set up a volunteer road patrol on Maine and New Hampshire turnpikes and secondary roads during severe storms.

Driving cars completely outfitted for winter emergencies, these CB'ers have assisted hundreds of stranded motorists in various ways, ranging from supplying gasoline or providing battery jumper cables to removing the occupants of the vehicles to warmth and shelter.

Tri-County members assisting city officials of Dover, N. H. in planning mobile radio control of their 1962 Children's Christmas Parade.

One of the more outstanding emergency calls came about when the Portsmouth Police Department called on the group to assist in tracking down a bandit wanted for assault and armed robbery. More than forty units responded to their call within 90 minutes of alert. The club's base units also passed on the information and description of the wanted man to other clubs in Maine, Massachusetts and New Hampshire. In a short period of less than two hours more than two hundred radio equipped cars were on the lookout for the culprit.

With more than eighty member mobile units located in the three county area, it is nearly impossible for a fire, accident or other serious problem to go undetected or unreported by these volunteer citizens with their CB radios.

Sometime ago the group selected Channel 20 as their emergency frequency although they do often work on Channel 11. The cooperation of the other citizen banders in the area has been outstanding. One of the more interesting stories to the club members, took place last fall during a search for an 80 year old man lost overnight in rain-soaked woodlands.

On this particular Sunday morning the 6 and 7W skip station were really rolling through. Suddenly the skip began to drop off and the channel was quiet except for the search parties in the field.

Late that afternoon the man was found, taken to a hospital for a check-up, and the mobile units began the trek home. Then out of the ether came a call from one 7W to another 7W, and a woman's voice said, *"Grace, I just thought I would call you to let you know that they found the old gentleman they were looking for in New Hampshire and he is going to be all right."* With that, the skip stations came back in—proof positive that New England CB'ers had a lot of assistance that afternoon from the Southern CB neighbors.

The future objectives of the club? To assist in every way possible the establishment of better control and use of CB radio as a means of personal, business and emergency communications, so vitally necessary today on the busy highways and by-ways of America.

To our CB friends all over the country, if you are traveling through Maine or New Hampshire look for the Tri-County plates on the front and rear of our vehicles and the blue and white windshield stickers. Here you will have found a friend that you can truly turn to in time of need or just to pass away a pleasant hour over a cup of coffee along the road.

10-7

By popular demand!

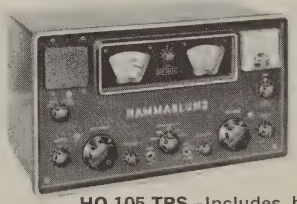
the HAMMARLUND HQ-105-TR

*24 hr. clock-timer optional $9.95

3 in 1 TRANSCEIVER

1. **CB TRANSCEIVER** — A maximum power transmitter and all-channel (22) receiver.
2. **SWL RECEIVER** — 540 KCS to 30.0 MCS coverage for overseas, communications, amateur, marine, and even standard broadcast reception.
3. **10 METER HAM TRANSMITTER** Easily and quickly retunes to 10 meter amateur band (when proper license is obtained). Supplied with one CB crystal. Receiver covers all amateur bands within frequency range. Get a boost toward your novice or general license by receiving W1AW code practice lessons.

NOW AVAILABLE IN 3 MODELS



HQ-105 TR—The basic model. (less speaker, microphone or clock) only **$219.50**

HQ-105 TRS—Includes built-in speaker. **$224.50**

HQ-105 TRC—With 24 hour clock-timer in place of speaker. **$229.45**

WRITE FOR COMPLETE DETAILS . . .

Since 1910 HAMMARLUND

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You should see your dealer about . . .

JAMES KNIGHTS "GOLDEN LINE" CITIZENS BAND CRYSTALS

Dealer, distributor and manufacturer inquiries invited

The James Knights Company
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JK PRODUCTS

GROVE CB SALE!

☐ 3-ELEMENT BEAM ANTENNA (Reg. $29.95) (mounts horizontally or vertically)	$11.99
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☐ FAMOUS MAKE COLINEAR ANTENNA ($49.95)	$24.99
☐ BODY MOUNT+102" WHIP+SPRING+ 25 ft. coax cable	$7.69
☐ BUMPER MOUNT+102" WHIP+SPRING+ 25 ft. coax cable	$9.69
☐ DOUBLE BUMPER MOUNT+102" WHIP+ SPRING+25 ft. coax cable	$10.69
☐ LOW PASS FILTER + HI-PASS FILTER KIT	$3.49
☐ 11-PC. MOBILE NOISE SUPPRESSION KIT (Includes tunable generator filter)	$3.99
☐ JK .002% TOL. CB CRYSTALS - RECEIVE OR TRANSMIT (3rd overtone—specify make, model, channel)	$2.49
☐ 100 ft. RG-58U COAXIAL CABLE	$2.99
☐ 50 ft. RG-8U COAXIAL CABLE	$4.49
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Check items wanted. Return ad w/check or M.O. Include Postage. Excess returned. C.O.D. orders 50% down (Note: Beam Antennas must be shipped railway express)

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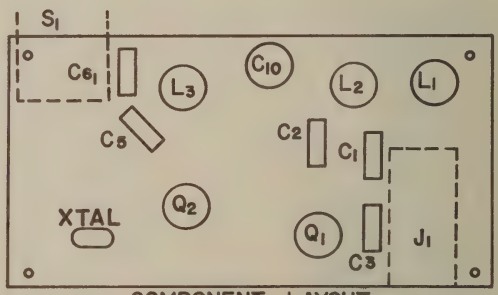
4107 W. Belmont Ave., Chicago 41, Ill.
☐ Rush items checked
☐ Send FREE catalog of giant CB Values

Name .....
(please print)
Address .....
City .....Zone.....State.....

ROLLING STONER CONVERTER

(Continued from page 14)

budget. Almost everything in the converter is standard and may be purchased at local radio supply stores. The two possible exceptions are the transistors and the crystal. The transistors are made by Texas Instruments, Inc., and may be obtained for about $2.00 from most distributors or by writing Electronics, 7224 Agate Street, Alta Loma, California. The crystal is a third overtone type and any frequency between 27.85 and 28.5 mc. may be used. These crystals cost between $3.00 and $4.00 and are also produced by International Crystal Company, Texas Crystals, etc.



COMPONENT LAYOUT

Stoner Converter Parts Layout

Installation—The converter can be bolted to the underside of the dashboard, fastened to the steering column, or even tucked out of sight in any convenient location. Since no tuning is required to use the converter, it is only necessary to flip on the switch and tune the car radio to receive Citizens Band signals.

The CB Mobile Converter will work with any car radio antenna of 3 feet or more. However, for the longest distance reception a standard CB whip antenna should be installed at the rear of the car. If you use a separate antenna, wire the converter as shown in fig. 3.

10-7

STATION OF THE MONTH

"A New CBH Feature"

One of the first trends CBH spotted after tallying up the "Gigantic Giveaway Cards" for November was the repeated urging that we run a "Station of the Month" column. This seemed like a good idea, and since so many of our readers want such a section, *here we go!*

This is a contest, and the winner each month will receive a two year extension on his subscription, or a 12 month new subscription (if he is not already a subscriber).

Entries become our property, none may be returned. Entries will be kept for three consecutive contest periods after their arrival and then eliminated from the running. In other words, if you enter today, your submission will be in the January, February and March 1962 contests, assuming that you don't win someplace along the line.

The winner will be the person who submits the entry, and this does not necessarily have to be the CB'ers about whom the story is written. In other words, you can enter using a bashful CB friends station, and you will be given the credit as the winning entry, although it may be your buddy's station!

Entry is simple. In 250 words or less tell us about the station, how it is put together and how it is used. Tell us about some of special things the operator has done with his station, how he has made it unusual in layout and function. The station may be a mobile or base station. Enclose with the entry a clear snapshot of enlarged photo (no Polaroids *please!*) of the station. Judging will be based primarily on the design and function of the station, secondarily on the professional twist the writing carries. Don't try to be a Hemingway . . the story you are telling will count much more than how it is told. Lastly, typewritten entries will be given preference.

Deadline for the first contest period is November 25 in our office. Address entries to "Station of the Month, P.O. Box 3150, Modesto, California." OK you guys who asked for this feature (some 1200 plus in all!) . . . let's see those entries!

10-7

CB BY KAAR!

Kaar's four "quality-engineered" units now represent the most complete line of CB equipment available.

The TR327B "D" Phone is the CB enthusiast's dream . . . with 23 tuneable CB channels. Up to five transmit channels — your choice of crystal controlled or precision tuned receive channels.

The TR327 offers four crystal controlled CB channels.

The TR327A adds Standard AM broadcast Band for extra convenience and fun.

The TR330 Han D Phone is the compact, fully-transistorized, portable unit that completes the Kaar CB line. Now available with 400 mw audio for maximum "talk power."

WESCON AND ALCOA DESIGN AWARD WINNERS

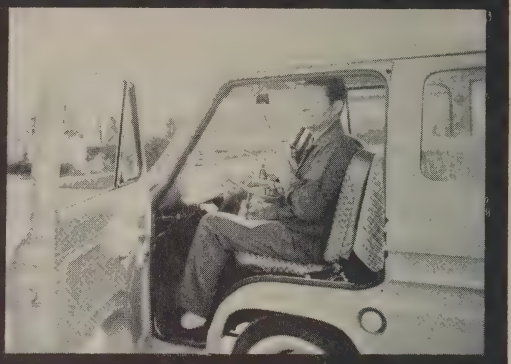
KARR ENGINEERING CORP.
2921 Middlefield Road, Palo Alto, Calif.
Please send more details about Kaar CB

Name_____

Address_____

City_____ State_____

CLYDE'S CORNER...



by Clyde D. Moore, 9W0219

Clyde Moore, CBH Editor at Large, is on an extended motor trip throughout the U.S. His purpose? To meet you and report your CB activities and the activities of your CB club to other CB'ers and clubs throughout the country. Look for his light blue Chevy GREENBRIER with the 2 CB whips. He monitors NATCH-9 and 11.—Ed.

Well here we are in New Mexico, the "Land of Enchantment." Betty and I changed our planned itinerary, in order to be back in Lubbock, Texas for the big jamboree.

In Hobbs, we met Mike Levy, 15Q0541, along with other members of the "CB Wave Benders Club." The membership at present is an even dozen. However, they're planning a drive for new members. Their objective is to get an adequate number of active CB'ers to form a search and rescue squad. "NATCH" is their channel and June Gambill, Miss 15Q0257, is one of the monitors.

The CB'ers in Carlsbad, Artesia and Roswell are mostly ranchers and farmers. They do not have an organized club, instead they have formed a cooperative group, which covers the entire vicinity. Their coverage ranges from Whites City, N.M. up highway 285, north some ninety miles, to Roswell. This area extends approximately thirty miles either side of the highway.

After a short tour of the beautiful Carlsbad Caverns, we had coffee with some of the CB boys in Carlsbad. We met B. A. Clark, one of the 10W0644 units. He's associated with R & R Electronics Supply Co., Inc. of Roswell and licensed with the same company in Lubbock, Texas.

Artesia is the heart of this vast communications relay area. Betty and I spent an enjoyable evening with Mr. and Mrs. H. E. Kissinger, 15Q0990, and their lovely young daughter, at their ranch home just south of town. Ed had never seen a copy of the callbook and was delighted to know I could supply him with the first three. After I filled him in on the scoop about the new CBH CALLBOOK/HANDBOOK for 1962, he immediately asked me to have T.K. reserve him a copy.

Mr. and Mrs. Jim Martin, 15Q0042, were on hand and invited us to their house for coffee, cake and our first look-see at the new E.C.I. Courier.

It was late evening when we passed through Roswell, therefore, we missed meeting the CB'ers there. The CB'ers in the surrounding areas of these cities all monitor Channel 21, and use Channels 7 and 4 as their working channels.

In the small town of Vaugh, N.M. we were surprised to see ground planes at some of the gas stations. But another surprise was yet to come. Alex Gazolas, 15W-1646, at the Western Motel and Service Station, told us of a new service they have found for CB radio. Believe it or not, they have a CB rig in the rural school bus. Alex informed us he had been called by the driver on various occasions. One interesting story involves an occasion when the school bus skidded off a high mountain road into a snowbank. The bus was loaded with school children and the temperature was below freezing.

From Alex we also heard about an ac-

cident 15W1475, one of the Diamond T Livestock Co. trucks, was involved in. The truck, loaded with ninety head of sheep, overturned thirty miles from Vaughn. Wishing he had a CB rig in the truck, the driver hitched a ride into town with a highway patrol officer. He used Alex's radio to call the ranch house for another truck and horses. By the time he had returned to the scene, some of the neighboring CB-ranchers had gathered his sheep for him.

Alex monitors Channel 20 during the daylight hours. Arlen Allen, 15Q0055, of Allen Motor Co. and Wrecker Service, monitors Channel 14 continuously. The twenty-five rancher-farmer CB'ers, in the surrounding vicinity, monitor Channels 20, 14 and 11.

Albuquerque is very active on the CB band. It's the home of the "Albuquerque Citizens Radio Association." Within the 92 members they also have a CB/CD unit called the ARCA-net. Jim Burnham, 15Q-0300, is the CD coordinator, and Russ Russell, 15W0259, is the net-control officer. Russ is in charge of the A, B and C division nets that are assigned to the area. They use Channels 11 or 4, depending upon conditions.

The "Bernalillo County Search and Rescue Unit Emergency Council", and the "Jeep Herders club", (sometimes called the "4-Wheel Drivers") work the mountain region together, in the event of an emergency. Lint Williams, 15W2800, is in charge of this group and Channel 19 is the working channel.

The Air National Guard also employs CB, but we were unable to gather information concerning them. There are approximately 150 CB'ers in Albuquerque and Channels 4, 7, 9, 11 and 19 are usually busy.

We stopped in at Electronic Fabrication Engineering Service to let our good buddy Eddie Cooke, 15W1178, tune up our "Johnson". Eddie is one of the CBH gang and has CB Horizons magazines available for resale. We met Don Spellum, electronic engineer for the new Futuronic, Inc. and had a long and interesting discussion about their new line of CB equipment that will be announced soon.

10-7

WANNA CALL CQ?

(Continued from page 7)

The License

As with the Novice license, the Technician license exam may be administered by any General Class license holder and mailed into the FCC.

The code requirements for both licenses, as we mentioned, are 5 words per minute. It's hard to explain just how slow 5 words per minute actually is—but if you can memorize the code at all you will probably be able to take 5 w.p.m. right off the bat without any additional work.

The written part of the Technician exam consists of "Basic Amateur Practice" (operation of radio apparatus) and "General Regulations." The tests are multiple choice affairs consisting of 50 questions.

Studying for the exams can be accomplished by working with an active Ham, by enrolling in a correspondence school, or by studying by yourself. This last method can be easily accomplished by purchasing some of the fine books available. We boned up for our exam by using the following books from John F. Rider Publisher, Inc., 116 West 14th St., New York 11, N.Y.:

1. *Getting Started in Amateur Radio,* by J. Berens ($2.40, 136 pp).
2. *How To Study and Take Exams,* by L. Pettit ($1.00, 96 pp).

These two books should give you all you will need to know.

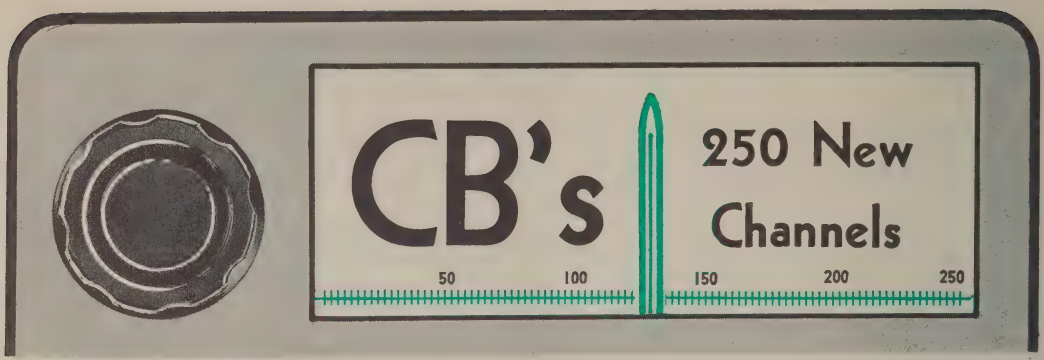
How Hard?

A standard question is, "How hard are the exams?" The answer depends solely on how much aptitude you have for electronics, how well you can study, the materials used for learning, and, *how much you want the license.*

Here's your chance to get the hamming out of your system without breaking the law. Save CB for its 1001 proper and permissible uses, enjoy it, use it, help others with it; but for Pete's sake if you want to be a ham get yourself one of these relatively simple licenses and do your rag-

To make it as easy as possible for you to get on the air we have even given you a chance to obtain a Ham transceiver free! (see Gigantic Giveaway) also, read the article in this issue, "Selecting Your Amateur Equipment."

10-7



Part Two (conclusion)

By Robert B. Cooper, Jr. 12Q2339
Publisher- Horizons Publications

In the November CB Horizons I outlined the reasons behind the FCC's concern for the future of this nation's television system. It is because of this concern, and because today's present television allocations system will not accomodate a growing America, that one day Citizens Band Radio will have a new group of channels.

As noted last month, FCC Commissioner Robert E. Lee, in July of 1958, proposed to the United States Senate that the then pending Class D Citizens Radio Band be eventually expanded to include a 2.5 megacycle segment between 54 and 56.5 megacycles. This would accomodate an additional 250 - 10 kc. wide CB channels. As the Commissioner's proposal was buried in a mountain of other recommendations, it attracted little, if any, outside interest.

The proposal has gotten no further today, at least as far as CB'ers are concerned. However definite progress in the overall plan to re-shape the entire VHF-UHF allocations assignments can be reported. The Commission has acted to remove VHF television stations from such cities as Fresno, California; Bakersfield, California; Madison, Wisconsin; Champaign, Illinois; Hartford, Connecticut; Lancaster, Pennsylvania; and others. The eventual outcome of changing these VHF TV stations to UHF will be a movement into the VHF television spectrum by a number of two-way communications users, *including CB radio*. Already during the past 30 days, the Commission has taken steps to allow FM two-way Business and Public radio users to move into space occupied by the VHF television stations.

What can you do when the Commission acts to move VHF television serving your area to UHF? *Support that move . . of course!* The sooner VHF television is no more, the sooner CB radio will gain additional channels. Be aware that *it is* for the national good, the progress of America and our economy, that television be moved to UHF where more stations can operate from a given city, thus freeing the VHF television spectrum space for two-way radio . . which is itself the fastest growing and most important new development on the American electronics scene.

What About Five Meters?

The proposed 54-56.5 megacycle region falls in the old (pre-war) "5 meter" ham band. After the war this 54.0-56.5 megacycle range was given to channel 2 television. What manner of service can we expect on five meters? What will our communications range be? What about mobile operation? Beam antennas? Power limits?

Let's tackle these questions one at a time. First of all, our present 11 meter band *is not good* for ground wave. 11 meter signals with a given amount of transmitter power do not, as a rule, travel nearly as far as five meter signals of the same transmitter power level. The range on five meters with the same type of antenna can be expected to be approximately 50 percent greater.

This is partially due to better ground wave characteristics at the 5 meter frequencies, and partially due to better-more sensitive receivers, which are impossible on 11 meters due to high background noise.

One of the most imaginative improvements we can expect between 11 and five meters is in the beam antenna department. A 3 element beam at five meters (see il-

ANNOUNCING NEW BROWNING 23/S-NINE CB TRANSMITTER

23/S-NINE TRANSMITTER $144.00 (with one crystal)

Now with built-in 23 channel selector switch and Standing Wave Indicator!

$189.00 (with 23 matched crystals installed)

Browning presents a new concept in Citizen's Band radio communications. It's the 23/S-NINE base station transmitter with built-in all-channel selector that lets you transmit on any of the 23 CB channels *at the flick of a switch!* Also new is the built-in Standing Wave Indicator for perfect matching of transmitter and antenna system for more powerful, long-range transmissions.

Among other outstanding 23/S-NINE features: special audio circuitry with speech clipper and splatter filter for perfect modulation; advanced design power supply with silicon rectifiers for low operating temperatures and maximum component life; highly efficient output circuitry using Pi network for maximum transfer of energy to antenna.

Order your Browning 23/S-NINE Transmitter now for home or business use.

Send today for FREE CB information Kit: 105 UNION AVE., LACONIA, N.H.

browning

FOUR CONVENIENT PURCHASE PLANS

lustration) is less than ½ the size of a 3 element 11 meter beam. This means that if you have room for a 3 element 11 meter beam now, you can easily erect a 6 element 5 meter beam! Beam costs are lower at five meters, and it is not unlikely to expect CB'ers to be using 4 stacks of 5 element 5 meter beams (20 elements in all!) making that five watts sound for the world like 500 watts! Obviously with bigger more powerful beams, we will be able to transmit further on ground wave, and copy other stations further also.

Range wise, it is merely a matter of elementary math to state that two way base-to-base communications range on the five meters should easily stretch out beyond 50 miles in even the most difficult reception areas, and as far as 85 miles over flat land or water.

Mobile work on five meters is a joy. Gain antennas for the mobile are small, and horizontal polarization even for mobile work is very possible with existing antenna designs.

The only fly in the immediate ointment is "how soon will we get additional channels?" *You* may be able to speed it up by supporting the overall plan to move television to the UHF (ultra high frequency) range. When the FCC acts to do this in your area, do everything you can to support the move. Explain to those opposed to the move that it is for the good of the nation, the televiewer as well as the two-way radio enthusiast and businessman, that television get more channels (on UHF) and that two-way radio get more channels (on VHF). Perhaps your CB club will feel compelled to file a petition or two with the Commission, *as such time as the proposed move comes into your region.*

When the time comes, CB Horizons stands ready to help you, in your area, to realize the eventual expansion of *our service* through an additional 250 channels in the 5 meter band. If you need help in solidifying your CB club's efforts in your region, contact this office.

10-7

BEFORE WE SIGN OFF

D. C. FLASHES!!

By REX HOLMES, 24W2424
"Our Man in Washington"

New FCC Report Out

A new technical report (TR-6104) on the "Control of Radio Frequency Interference from Nonlicensed Apparatus"—covering incidental and restricted radiation devices, ISM equipment, methods of control of harmful interference, and the problem of measurement of radiation to insure compliance—has been prepared by the FCC. The report includes a list of industry and professional committees and organizations active in the field of radio frequency control.

Copies of the report, which should be added to the library of every CB club, are available upon request from: FCC Technical Research Division, Room 2220, New Post Office Building, Washington 25, D.C.

Oh that Diathermy!

Speaking of interference from nonlicensed radiation devices, many of you have written to us asking if we can do anything on an official level to eliminate the diathermy noise on 11 meters. You ask, "Aren't the diathermy machines supposed to operate on 27.120 mc.? If so, why are they all over the band? What can we do to get them off the CB channels and back to 27.120 mc.?"

These are all good questions, and being a CB'er myself, I can sympathize with the writers.

Unfortunately, the fact that these infernal contraptions are *supposed* to operate on 27.120 mc. (between channels 13 and 14) is more fiction that fact. Remember that little thing we CB'ers live with called *tolerance?* On Channel 13 we are allowed to roam but 1 1/3 kc. away from 27.115. The diathermy machines have to live with a tolerance too—160 kc. This means that as long as they stay within the frequency band of 26.960 mc. to 27.280 mc., they are "on frequency" as far as the FCC is concerned. You don't have to be an Einstein to see that if the CB band runs from 26.965 mc. to 27.255 mc., the diathermy machines can wander all over the place *legally*.

Medical people have informed us that because of the very theory upon which diathermy operates, it is necessary that they operate within such a wide frequency tolerance.

It would therefore appear that there is nothing which can be done within the forseeable future to change the situation.

Stay Home and Become Illegal

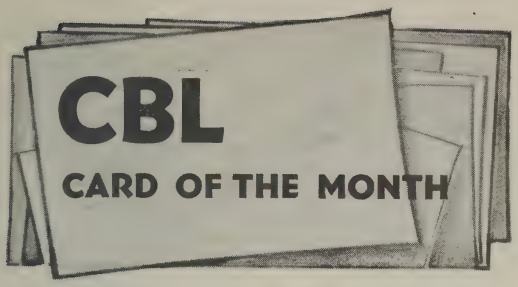
A peculiar situation has arisen in some areas of the country. Some cities are growing at the edges, and homes which were once located in country territory are now being incorporated within city limits.

Generally this changes the mailing addresses of all the homes which are "relocated." Inasmuch as the law says that if you move you must re-apply for a new CB license, you must also re-apply for a new CB license if your address changes, *even though you have not actually moved*. This means an entirely new Form 505 sent to Washington.

After the regular processing time you will be issued a license for the new address which will contain new call letters. As a point of law, you may not *legally* use your old callsign once your address has been officially changed on Post Office Department records, that is until the new license has been processed.

New FCC Drive Announced

The FCC has recently made a report public which is part of a new "drive." This drive is aimed at stamping out the popular misconception that low power devices can be operated throughout the frequency spectrum as long as their radiations do not exceed certain field strengths. This report may be obtained by requesting Bulletin OCE No. 11 from: Office of the Chief Engineer, Federal Communications Commission, Washington 25, D.C.



"A New CBH Feature"

CBL cards are the CB version of amateur radio QSL cards. A CBL card displays the sender's CB call letters, his name and his address. It may contain a few words about his station (i.e. Rig here is GB-200, antenna is Magnum M-27) and is probably has spaces where the sending station jots down the call letters of the the station he is sending the card to, the time and date of the 'contact' and perhaps a line for remarks about the signal. The CBL card is most commonly used as a "courtesy thank-you" much in the same way you jot off a note to your great aunt Harriet after she sends you a necktie for Christmas.

Many CB'ers enjoy sending and receiving CBL cards, and in fact one only has to glance through the CBH classifieds to see that a number of printing firms have special prices for 100, 200 etc. cards of one or more colors.

With the January issue of CBH, we will inaugurate a new feature called *"CBL Card of the Month."* Here's what you do. Send one of your cards to "CBL Contest, P. O. Box 3150, Modesto, California." If your card is chosen as *"The CBL Card of the Month,"* we will reward you with a one year (12 month) extension on your subscription. If you are not a subscriber, you will receive a six month free subscription to CBH.

We will not be able to enter into correspondence concerning cards, and the decisions of the judges will be final. The entire idea of the contest is to display in print the best card designs as created by CB'ers. Each month is a whole new contest, and you may enter month after month if you wish.

Deadline for the January issue contest is November 25. Send in your card today!

(add 5¢ per crystal for postage and handling)

CITIZEN BAND
CLASS "D"
CRYSTALS

3rd Overtone: Hermetically Sealed .005% tolerance—Meet F C C requirements, ½" pin spacing—.050 pin diameters. (.093 pins available, add 15¢.)
ALL 22 FREQUENCIES IN STOCK!
$2.95 EACH

The following Class "D" Citizen Band frequencies in stock (frequencies listed in megacycles): 26.965, 26.975, 26.985, 27.005, 27.015, 27.025, 27.035, 27.055, 27.065, 27.075, 27.085, 27.105, 27.115, 27.125, 27.135, 27.155, 27.165, 27.175, 27.185, 27.205, 27.215, 27.225.

Matched crystal sets for Globe, Gonset, Citi-Fone and Hallicrafters Units . . . $5.90 per set. Specify equipment make.

RADIO CONTROL CRYSTALS
in HC6/U HOLDERS—SIX FREQUENCIES

In stock for immediate delivery (frequencies listed in megacycles); tolerance .005%. ½" pin spacing. .050 pin diameter. (.093 pins available, add 15¢ per crystal.) Specify frequency.
26.995, 27.045, 27.095, 27.145, 27.195, 27.255 ..... $2.95 EACH
(add 5c per crystal for postage and handling)

ASK YOUR PARTS DEALER FOR TEXAS CRYSTALS
See big red display . . . if he doesn't stock them, send us his name and order direct from factory.

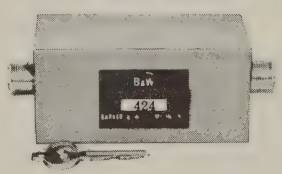
Send for FREE CRYSTAL CATALOG #860 WITH OSCILLATOR CIRCUITS

Now! Engineering samples and small quantities for prototypes now made either at Chicago or at Ft. Myers plant. 24 hour service!
CHICAGO PHONE GLadstone 3-3555

All orders Shipped *1st Class Mail.* Rush order to:

TEXAS CRYSTALS
DEPT. H-111, 1000 CRYSTAL DR., FORT MYERS, FLA.
For fastest possible service, Phone WE 6-2100

TV INTERFERENCE?



A B&W low pass filter will end interference with your neighbors TV reception. B&W Model 424 is a three-section low pass filter which installs in the antenna coaxial line. Reduces all frequencies within the TV band by 60 db (*a reduction of 1-million times*).

The B&W Model 424 offers negligible filtering to frequencies below 30mc. Made for installation in 52 and 72 ohm coax lines. Ideal for any transmitter (*up to 100 watts*) operating between 1.5 and 30 mc.

At your dealers for only **$8.85**

B&W

BARKER & WILLIAMSON, Inc.
BRISTOL, PENNSYLVANIA

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Rates for CLASSIFIEDS are 10¢ per word for advertising which, in our opinion, is obviously of a non-commercial nature. A charge of 25¢ per word is made to all commercial advertisers or business organizations. We do not bill for advertising in CLASSIFIEDS, nor can we acknowledge receipt of copy sent in. Full remittance MUST accompany all orders. NOTE: The products and services advertised in this section are not guaranteed by the publisher of CB HORIZONS. Closing date for the January issue is November 29th.

A BOMB! MY COLLINS "MBF" DELUXE CB RIG for sale. Fully converted with all 22 channels plus mike. This has a smashing signal. First money order or certified check for $250 takes it. A. J. Farmer, 11Q0227, P.O. Box 81, Azusa, Calif.

STOP WASTING THOSE WATTS! Let the SWR-1 help you improve that inefficient antenna system. Read r.f. power & SWR directly in watts — no guessing! Write for details. H & L Electronics, P.O. Box 125, Medford, Oregon.

RF PRESELECTOR KIT for Heath GW-10 transceiver. Increases selectivity and image rejection. Mounts inconspicuously outboard, extending only 1½" rearward. No transceiver wiring is cut, only one joint wire is unsoldered. Uses high-gm pentode 6AK5. Wire kit in one evening. Complete instructions. Send $8.99 ppd to HOLSTROM ASSOCIATES, P.O. Box 8640, Sacramento 22, Calif.

FREE SAMPLES — CB QSL CARDS. $2.50 per 100 in 3 COLORS. POSTPAID. Garth Printing Co., Box 51, Jutland, N.J.

CB-WPE-QSL CARDS — Samples ten cents, with catalogue twenty-five cents. BROWNIE, 3W1974/W3CJI, 3110C Lehigh St., Allentown, Pa. Order yours from Hamdom's leading QSL printer since 1939.

CITIZENS BAND HE-15 & HE-15A, TR800, 910, RA-395, 442, etc. owners disgusted? Relax! Hear only the channel you tune. Dual conversion adapter increases selectivity & sensitivity beyond belief. In easy-do kit form, all parts, schematic, pictorial, complete $14.95; with tubes $16.95, or $5.00 deposit & C.O.D. Order now! Bainbridge Radio, 2649 Bainbridge Ave., New York 58, N.Y.

QSL RUBBER STAMPS made to order. Send copy and check $6.25. Post Card size. Pete's Rubber Stamp Mfg. & Sales, P.O. Box 42, Preston, Iowa.

CB LICENSES LAMINATED in heavy gauge plastic. Machine processed to insure a permanent seal. Complete with eyelets. Remit $1.50 with your license. Lots of 4 more $1.25 each. Prompt service. Bernard L. Osborn, 18A5344, 16 Woodlawn St., Bluffton, Ind.

EVERY SET SHOULD HAVE ONE — Your CB license duplicated, with ID tag & plastic holder. All for $1.50. Send original license flat by Air Mail. 24-hour service. Satisfaction guaranteed. 1Q5226, Lee-Deck, Box 105, Westfield, Mass.

AUTOMOTIVE GENERATOR NOISE FILTER — This filter eliminates the noises from the generator at the source; on the generator. It is pretuned to CB frequencies and sealed against moisture, oil and dust. Simple to install (with complete instructions enclosed), efficient in operation. Only $3.00 postpaid. If your dealer does not stock, write: Ben N. Bartlett, 11W5592, 1815 W. 85th St., Los Angeles 47, Calif.

FROM OUTER SPACE — The famous "Q-BIRD" signal tone. Rams your signal through skip, hash, chatter, QRM, squelch, and diathermy. Installs in minutes. Special CBH price of $2.95 postpaid.

INCREASE YOUR OUTPUT with the TD-2 rectifier-tube replacement. Gives you higher B+. No filament drain, no tube to burn out. Plugs in tube socket. Specify rectifier tube to be replaced. Only $3.50 ppd. Order both "Q-Bird" and TD-2 from TWO-TONE ELECTRONICS, 250 N. Coronado, Los Angeles 26, Calif.

CB CALL CARDS — CB STATIONERY. Contact file cards 4x6, Decals (199 types), Gummed Labels, Rubber Stamps, etc., etc. Complete price list & many samples for 25¢ (deductible). Send to 1Q5226, Lee-Deck, Box 105, Westfield, Mass.

CB QSL! For the best, C Fritz, Box 1684, Scottsdale, Arizona. Samples 25¢ (deductible). See our world famous RAINBO CALLS, comic, space age, or regular samples. Be as proud of the cards you send as you are of CB.

CB'ers—SPECIAL 5-minute sand type timer, +15 sec accuracy. Full 3½" high, red and white trim. 89¢ including postage. No COD or stamps please. F & S ELECTRONICS SERVICE, 200 Maple Ave., Graterford, Pa.

WALKIE-TALKIE radiophones, converters, signal boosters at factory prices. Write for free literature. Vanguard Electronic Labs, 190-48 99th Ave., Hollis 23, N.Y.

CALIFORNIA CB DEALER FRANCHISES open for Lakeshore D55. Write Captain H. S. Walling, 12W2197, 1015 West Alamos Ave., Fresno 5, Calif.

THE CB QSL CARD — Distinctively New Type of Card. For sample send stamped, self-addressed envelope. Agency Press, 426 S. Princeton St., Itasca, Illinois. (18Q6749).

CITIZEN BAND! Update old transceivers, improve new ones. OZCO "Snoozer" adds-on squelch unit quiets to a hush! Compact, completely wired and guaranteed. Easily installed! Only $2.00 each, $3.95 a pair, postpaid (tax included). OZCO Sales, Canaan 3, Conn.

WANTED—Used CB, Amateur, Test or HiFi equipment. I buy, sell or trade any new or used equipment you may have or want. What do you have? What do you want? Monthly list of used equipment mailed on request. Bill Tagan, 305 E. 55th St., Kansas City, Mo.

WINNERS OF OCTOBER GIVEAWAY

The odds were nearly 30,000 to one but R. E. Moore, Jr., 4W1122 of Lewes, Delaware was the lucky CB'er for October when Our Gal Friday, Carlyne (12Q2207) reached into the old-oaken barrel and pulled forth his card for First-Prize in the CB Horizons' Gigantic Giveaway. Winners of the November contest will be announced in January.

Here are the winners of all those free goodies!

FIRST PRIZE—A Lafayette HE-20A transceiver: R. E. Moore Jr., 4W1122, Lewes, Del.

SECOND PRIZE — General Radiotelephone Model 615 SWR Bridge: L. J. Woods, 17W5910, Evansdale, Iowa.

THIRD PRIZE — Cush Craft CSG-11 Deluxe Ground Plane: D. L. Carpenter, 12Q1754, Nampa, Idaho. (temp.)

THIRD PRIZE No. 2 — Electro Voice 729SR Mike: F. Emahiser, 18Q3432, Plainfield, Ill.

FOURTH PRIZE—OZCO "Snoozer": W. Meek, 11W6682, Topeka, Kans. (temp.)

FOURTH PRIZES No. 2 to No. 6 — Texas Crystals:

V. Hamrick, 6Q5111, Ellenboro, N.C.
J. Wood, 6Q3033, Easley, S.C.
H. E. Danford, Jr., 19Q6322, Huntington, W.Va.
L. B. Houghaboom, 1Q4082, Orleans, Vt.
W. Tolpa, Jr., 1Q4678, Belchertown, Mass.

IMPORTANT VMP NOTICE

Effective immediately all pending VMP applications are being held up. In addition to this we wish to inform all presently authorized VMP stations that we are now re-evaluating the program and are herewith suspending the program until we can clarify certain problems of its operation which have been brought to our attention.

These problems are now being taken up with appropriate agencies and it is hoped that the matter can be brought to an early solution.

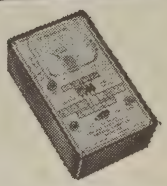
Effective immediately, and until further notification, please do not send out VMP monitoring cards, and, of course, send no reports to this office.

We hope that we will be able to resume this program in the near future and will notify you regarding this as soon as possible. In the event that the program is permanently discontinued, CBH will request that all unused monitoring cards be returned and will refund any monies spent by VMP'ers for the cards.

MAKE MONEY servicing C/B equipment with SECO

2-WAY RADIO TEST SET

Combination Crystal Checker, RF Signal and Field Strength meter. 0-50 ma. meter for final amplifier tuning. Use as RF output indicator. Checks activity on third overtone transmitter crystals—checks fundamental and high overtone crystals at fundamental frequency. Powered by two 1.5 V. "C" cells.



Model 500—wired and factory tested $29.95 Net

TRANSMITTER TESTER

For low power transmitters up to 160 MC. Calibrated for direct percentage reading of amplitude modulation; 0-5 watts RF output; 0-400 ma. RF output. Connection provided for headphones or scope. Optional "T" pad attenuator adapts to transmitters rated up to 50 watts.

Complete with all necessary cables and adaptors Model 510—$46.95 Net

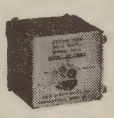
ANTENNA TESTER

For 50 ohm coaxial line applications. Simplified direct reading scales for SWR Antenna System Efficiency (read in percent and a Good-Poor scale), Forward Power and Reflected Power. Instrument insertion loss is negligible up to 160 mc. Power ranges are 0-10, 0-100 and 0-1000 watts maximum.

Comp. with instructions Model 520—$42.95 Net

ATTENU-LOAD

Dual purpose 50 ohm-50 watt unit—ten db "T" pad attenuator reduces power levels by 10 to 1 ratio . . . plus fully shielded 50 ohm termination for coaxial cable applications. Noninductance resistance load bank for low frequencies as well as VHF to 160 mc. With SO-239 coaxial jacks for input and output.



Model 511A $21.50 Net

SECO TUBE TESTERS

GRID CIRCUIT TUBE TESTER—full TV tube coverage—**MODEL GCT-9 $32.95 net**

GRID CIRCUIT AND TUBE MERIT TESTER—full TV tube coverage—**Model 78.....$69.50 net**

COMPLETE TUBE TESTER—tests Dynamic Mutual Conductance, Cathode Emission and Tube Merit—includes Grid Circuit Test—**MODEL 107 $139.50 net**

See your dealer or send coupon.

DYNAMIC TRANSISTOR CHECKER—tests PNP and NPN types—**Model 100 $19.95 net**

BATTERY ELIMINATOR—for transistor equipment—yields 0 to 15 V.DC from 105-125V. 60 cycle AC—**Model PS-2 $13.95 net**

SECO ELECTRONICS INC.
5015 Penn Ave. S., Minneapolis 10, Minn.

Please send me full information on Model

☐ 500 ☐ 510 ☐ 520 ☐ 511A ☐ 107 ☐ 78
☐ GCT-9 ☐ 100 ☐ PS-2

FREE Selling and Installing Citizens Band Equipment Bulletin

Name_____

Address_____

City_____ State_____

T.K. on C.B.

by TOM KNEITEL, 12Q1747

YOU HURT MY EGO!

Seems like every other letter I open is from a CB'er who wants to write an article for CBH. Having somewhat of an inferiority complex (several have argued that it's not that I have a complex, it's just that I'm inferior) I cringe a little and hide the letters in my pocket so that my boss won't see how many talented headers we have. Every time he steps out of the office (*never* share an office with your boss) to take a tranquilizer I'm able to dash off replies to one or two of the letters.

Don't you like my writing anymore? Do you want to replace me with you? Have you no interest in the fact that my old mother sold horse racing tips to send me through writer's school?

Well, since you're so determined to push me out of this magazine I might as well make a martyr out of myself and tell how to write for us—but I warn you, I may accept your article but you'll have a devil of a time unseating me from this nice leather chair the company recently purchased for me!

CB HORIZONS can use good original articles about CB, written so as to interest an active CB'er. Any article that has a real story to tell and tells it understandably is likely to be used by CBH, but a story has a higher chance of publication if prepared as indicated below.

The best guide to subject, style, approach and slant is the magazine itself. Remember that the articles you see are an example of the kind of material we want.

Note the magazine's approach. No matter how worthwhile your subject is, if it is presented like a chapter in a textbook, the reader will never get very far into it. Your story must contain information useful to the reader, presented in a style which will keep his interest.

Organize your story, make each part follow the other in step-by-step manner. Be certain to get all the facts in; we don't want to receive hundreds of letters of inquiry because you forgot to tell where you picked up some off-beat component.

Use special care in construction articles. Photographs are important, as are readable schematics—don't make up your own electronic symbols. Send a complete list of parts with values for each part.

Remember the "level" of your readers. CBH is for the CB'er—not for the engineer. Don't try to show your technical knowledge with technical terms or phrases known only to the advanced technician, and don't try to bring in expressions or mathematics which only an engineer can understand.

Your article may be of any reasonable length—as lengthy as it need be to tell your story fully. Set your typewriter at 40 characters across (this includes letters and spaces). Use only one side of an 8½″ by 11″ sheet of paper and double space. Be sure to write your complete name, callsign and address on each of the pages, and number each page. Save a carbon copy of your article until you see it in print in case we should want to ask you a question about it while it is being edited.

Photographs should preferably be 8″ by 10″ glossies, although other good, high contrast photos can be used if the negatives are sent with them. Polaroid photos are difficult to work with and are discouraged. Do not mark the prints, instead place a tracing paper over them and make

ENTER NOW!
QUICK!
PRONTO!
USE THIS CARD!

CARD GOOD DECEMBER DRAWING ONLY

Hey you crazy guys! I can't miss out on a deal like this! Give me a crack at all those free goodies!

Name _____, Call _____

Address _____

City _____, Zone _____, State _____

Local monitoring channel is _____.
I would like to see CBH have an article about: _____

_____

Club Affiliation (if any) _____

Club Address: _____

_____

_____

_____

SO WHAT
ARE YOU WAITING
FOR?

ENTER!

PLACE
STAMP
HERE

CB Horizons' Gigantic Giveaway

CB HORIZONS MAGAZINE

P. O. Box 3150

Modesto, Calif.

any necessary marking on it. Don't forget to write a caption explaining each photo.

Perhaps you are asking yourself at this point about payments for articles. It's a good question, so we've saved it for last.

An article is like a used CB rig, you can't quote a price on it without seeing how good it is. In general, our rates are based on 3 features; how good and original the article is; the "name" of the author (a well known professional writer generally commands a better rate than a "one-timer"); and how much time and effort went into the article (if we have to re-write it from scratch it is worth less to us).

We do not pay on a per-word basis—there is no reason to reward long-windedness.

We cannot pay for public relations articles that are written either by or about a particular CB club although we will consider publication of such articles if they are of general interest and well written.

If you send us an unsolicited manuscript (one which we did not specifically ask you to write) be sure to enclose a self addressed stamped envelope.

OK, now are you happy? I've given you the information to send me on the road to ruin. *Think you can do it?*

SEE CB ON TV

The Friday night television production, "77 Sunset Strip," shown over the ABC television network, will feature two episodes utilizing CB Radio during the weeks ahead. One or more of the series may have been shown by the time you read this (see cover story, page 19, November CB Horizons). A special "25W" call has been issued to the program (and it's producers Warner Brothers) by the FCC. The series appears at 9 p.m. local standard time in most areas over the ABC-TV outlet. The two shows where CB is scheduled are "The Bel Air Hermit," and "The Bridal Trail Caper." Watch for these shows, and watch this column for further news on the subject.

10-7

MATCHED SYSTEM ENGINEERING BY

GLOBE ELECTRONICS

TAILORED ANTENNAS & RIGS-FOR PEAK PERFORMANCE

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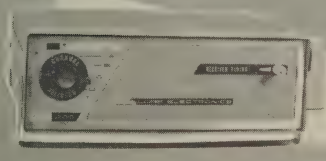
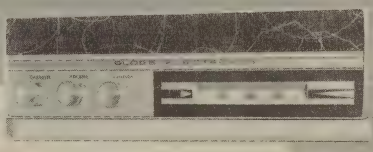


CB 200



CB 100A

POCKET PHONE

And...

the perfect Antenna--specifically designed for your application provides the ultimate in Citizens Band performance.

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Division of GC-Textron Electronics, Inc.

WESTERN PLANT: LOS ANGELES 18, CALIFORNIA
MAIN PLANT: ROCKFORD, ILL. U.S.A.

WE'RE STILL GIVING AWAY RADIO GOODIES EACH MONTH!

SEE PAGE 43 THIS ISSUE FOR OCTOBER WINNERS

Courtesy of CBH and the CB Manufacturers of America

NO MONEY! NO BOXTOPS! NO CONTESTS! JUST PRIZES!

All you do is fill out the card between pages 46 and 47 (or reasonable facsimile) paste a stamp on it, mail it to us before December 10th and have a chance at 12 prizes. Below are the prizes this month—be sure and see what we're giving away in our January issue.

$212.60 IN PRIZES THIS MONTH!

FIRST PRIZES — A Lafayette HE-35 6-meter Amateur Transceiver ($59.50)

From Lafayette Radio, 165-08 Liberty Ave., Jamaica 33, N.Y.
Small, compact transceiver with 7 watts input and a superhet receiver. Has plate modulation, built-in TVI filter, matches all antenna impedances from 30 to 300 ohms. Has noise limiter, ceramic mike, mobile mounting brackets, crystal.

and

A Pair of Lafayette HE-29A "Walkie-Talkies" ($78.88)

From Lafayette Radio, 165-08 Liberty Ave., Jamaica 33, N.Y.
Two units go to the winner. Fully transistorized with 9 transistors and 1 diode. Uses inexpensive penlite batteries. Each comes with leather carrying case, earphone, antenna, batteries and crystals. No license necessary to operate.

SECOND PRIZE—E. F. Johnson SWR Meter ($36.75)

From E. F. Johnson, Waseca, Minn.
Monitors SWR and relative power in 52-ohm lines. It will handle a full kilowatt on all frequencies through the 144 mc band making it useful for both CB and Amateur.

THIRD PRIZES—A Turner 350C Microphone ($10.08 Net)

From The Turner Microphone Co., 925 17th St., N.E., Cedar Rapids, Iowa
Ceramic hand-held mike with 80 to 7000 cps response. Push to talk, hanger button and dash bracket for mobile mounting, high impact case.

and

A Vanguard RF Amplifier ($7.69 Net)

From Vanguard Electronic Labs, 190-48 99th Ave., Hollis 23, N.Y.
Receiver signal booster contains high gain pentode tube in a circuit tuned to 27 mc. High image rejection. Wired.

FOURTH PRIZES — An OZCO "Snoozer" Squelch ($2.00)

From OZCO Sales, Canaan, Conn.
Add-on squelch quiets your receiver to a hush.

and

A CESCO Generator Filter ($2.95)

From CESCO, 6151 Dayton Liberty Road, Dayton, Ohio
Eliminates generator whine in mobile installations. Tunable for maximum attenuation.

and

5 Crystals For Any Unit From Texas Crystals ($2.95 each)

From Texas Crystals, 1000 Crystal Drive, Ft. Myers, Fla.
Five winners here—if you win you take your choice of a guaranteed .005% crystal for any channel for any CB unit.

ANTENNA TOPIX

(Continued from page 17)

Electrically, this antenna uses an "inductive stub" to provide a perfect match to the 52-ohm coax. The stub is made from a 39-inch length of RG-8/U shorted at one end and connected, at the other end, in parallel with the antenna and the feedline. The center conductors of both the feedline and the stub are connected to the vertical antenna mast, while the shield braids of both are connected to the four radials. Solder all joints. Both the stub and the feedline can be held in position along the 1x2's with plastic tape wrapping or by using metal cable-clamps.

Putting the antenna up requires two persons. First, climb to the roof and lift the antenna vertically. It's light, and if the wind isn't blowing you should have no difficulty at all. Then, position the antenna where you want it. While one person holds it in place, the other should *temporarily* secure both the middle guys (attached to the other ends of the egg insulators) and the top guys.

With all guys temporarily secured, the clamps at the base of the A-frame should be secured to the roof. If you use angle brackets, all bolts should be tightened securely. If you use 2x4's, attach each 2x4 to the roof and then bolt the bases of the legs firmly to them.

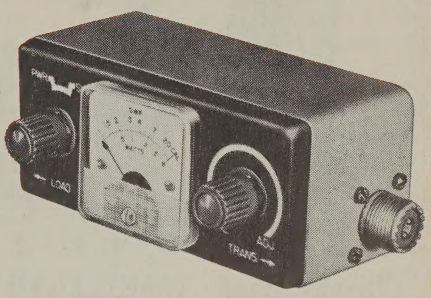
Now, go back to the guy anchors. Straighten the array in a vertical plane by tightening or loosening guys, and finally secure them firmly. Route the coax down to your station location, and you're all set to go.

PERFORMANCE: No antenna description is complete without a summary of performance characteristics. This antenna gives coverage in all direction, with signal strength about equal to a colinear and slightly greater than a conventional groundplane (due to the matching). From my rather poor location, best ground-wave range to date has been 25 miles—but no other antenna tried would get more than 20! You won't regret the effort you put into building it.

10-7

Don't guess . . . be **SURE**
of peak CB performance
with

CITIZENS BAND POWER & SWR METER



Model 290

ONLY $26.50

This compact, inexpensive MicroMatch Meter makes it easy to tune transmitter and antenna for maximum power output. It measures *actual* RF power output on an accurately calibrated 0-4 *watt* scale and standing wave ratio on an SWR scale.

OTHER FEATURES

• Easy to read, simple to use • Continuous reading, may be left in circuit • No external power required • Ideal for dashboard mounting

Your local communications equipment dealer carries this efficient meter. See him today.

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NO LICENSES, TESTS OR AGE LIMITS

9 LAFAYETTE TRANSISTOR *CITIZENS BAND* "WALKIE TALKIE"

39.95
2 for 78.88
NO MONEY DOWN

HE-29A

● Completely Wired—Ready to Operate ● Fully Transistorized—9 Transistors plus 1 Diode ● Uses Inexpensive Penlight Batteries ● No License, Tests or Age Limits ● Comes with Leather Carrying Case, Earphone, Antenna, Batteries and Crystals

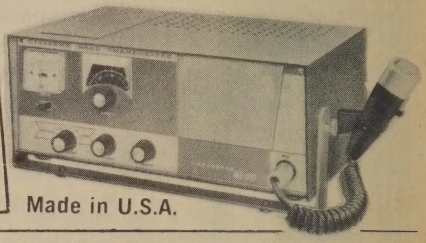
As simple and easy to use as the telephone—and twice as handy. Receives and transmits up to 1.5 miles under average conditions. Weighs only 18-oz. and slips into your pocket. Push-to-talk button operates built-in speaker as sensitive microphone.

LAFAYETTE HE-20A

Citizens Band TRANSCEIVER

● Pi-Network for Greater Power Output ● Calibrated "S" Meter ● Series Gate Noise Limiter ● Tuneable Superhet Receiver over all 23 Channels ● 4 Crystal-Controlled Transmit Positions ● 4 Crystal-Controlled Receive Positions ● Dependable Push-To-Talk Ceramic Microphone & Relay ● Illuminated Dial ● Built-in 12-Volt Power Supply ● Complete with Matched Crystals for Channel 9

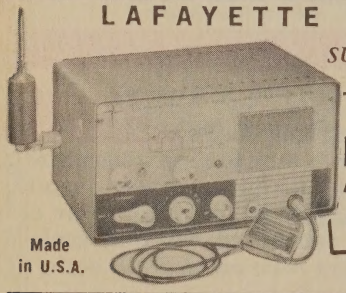
109.50
NO MONEY DOWN



Made in U.S.A.

LAFAYETTE HE-15A Citizens Band TRANSCEIVER

SUPERHET



ONLY **59.50** NO MONEY DOWN

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● Completely Wired—Not A Kit ● 5 Crystal-Controlled Transmitting Positions ● Tuneable Receiver Over Full 23 Channels ● High Output Ceramic Microphone ● Complete with Transmitting Crystal for Channel 9

A compact, precision transmitter and receiver covering up to a 20 mile or more radius, depending upon conditions. The HE-15A features an effective full-wave variable noise limiter, planetary vernier tuning. RF and, microphone jack on front panel, 12 tube performance from 4 dual-function tubes, 2 single-function tubes, 2 rectifiers.

HE-19	Telescoping Whip Antenna	Net 3.95
HE-16	Power Supply for 12 Volts	Net 10.95
HE-18	Power Supply for 6 Volts	Net 10.95

LAFAYETTE ALL-IN-ONE CITIZENS BAND MOBILE ANTENNA

The Scoop Buy for Citizens Band Mobiles

6.95

HE-800WX

● Chrome Swivel Base ● Stainless Steel Spring ● 102½" Stainless Steel Whip for Optimum 11-Meter Performance

Chrome swivel ball mount base designed for mounting on any surface. Stainless steel spring holds rod in properly adjusted position and prevents rod damage from shocks and blows. Stainless steel whip for maximum resiliency and strength.

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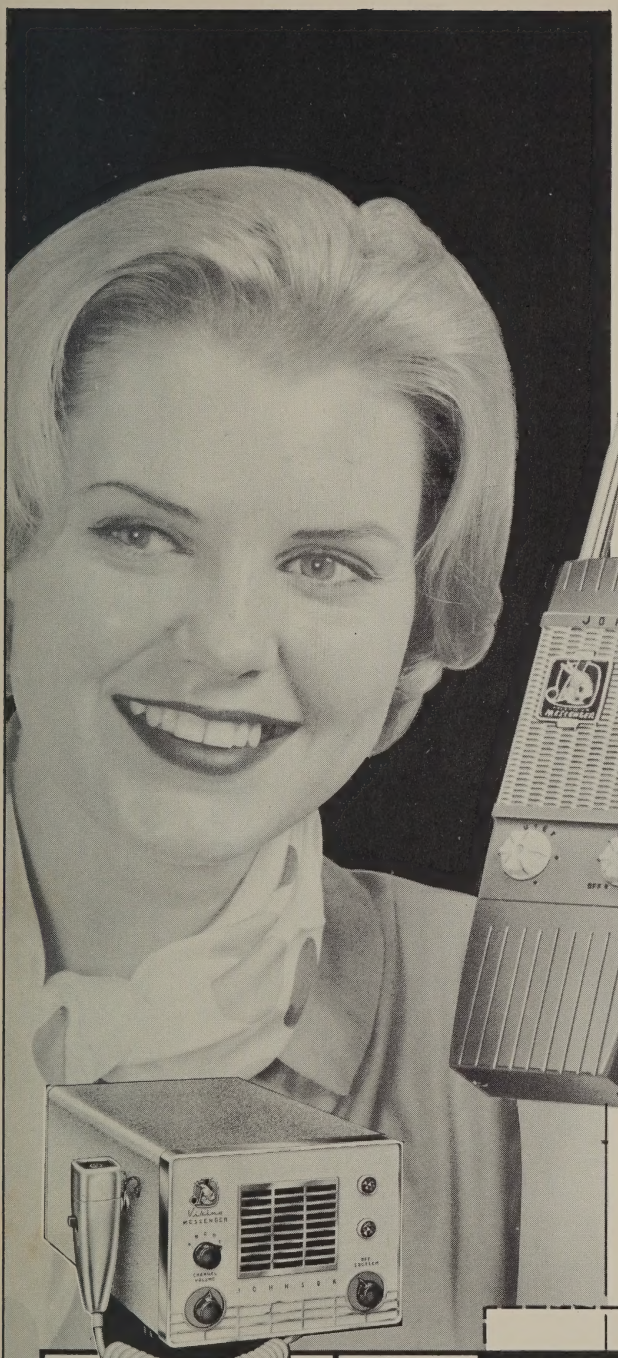


HERE'S THE NEW, 2-WAY HAND-HELD TRANSCEIVER THAT OUTPERFORMS 'EM ALL!

PERSONAL *Messenger*

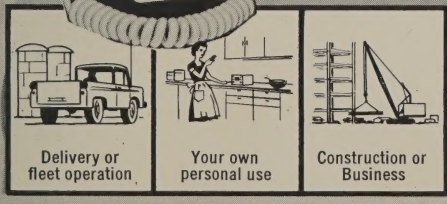
• No license required—may be used at once! • Meets FCC requirements for use with licensed Citizens' Band stations, too!

This is the new "Personal Messenger"—a superbly engineered 2-way crystal-controlled transceiver so compact it fits in your hand—so flexible it can be used in thousands of applications! 11 transistors and 4 diodes—superheterodyne receiver with exclusive tuned R.F. amplifier gives you twice the sensitivity and *more than 40% more range than units with conventional circuitry! Powerful two-stage transmitter delivers more power output than similar units with the same rated input!* Unmatched audio intelligibility and razor-sharp voice reproduction—automatic noise limiter—automatic volume control—positive squelch control—elastic hand strap—operates on penlight or rechargeable nickel-cadmium batteries.

$109.50

ILLUSTRATED AT LEFT—The Viking "Messenger"—maximum legal power Citizens' Band crystal-controlled transceiver. Excellent receiver sensitivity and selectivity—highly efficient transmitter punches your signal home! Built-in squelch—AVC—ANL. With tubes, push-to-talk microphone and crystals for 1 channel.

FROM $134.95



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